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THE
LUTHERAN CHURCH
AND
CALIFORNIA

By E. M. STENSRUD
Pastor Trinity English Evangelical Lutheran Church

SAN FRANCISCO, CALIFORNIA, U. S. A.
MARCH, 1916

DEDICATION

This volume is respectfully dedicated by the author to the many who have so nobly contributed, either financially or otherwise, to the successful upbuilding and rehabilitation of the English Lutheran Church interests in California.

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PREFACE

THE author has no apology to make in presenting this volume to the public. Only would he beg permission to offer a few words stating the reason for undertaking the arduous task of gathering all the data contained herein.

It is now soon nineteen years since the writer came to California. Not many years had passed before inquiries came reregarding farm conditions of this State. Ignorant as he was on the subject he paid little or no attention at first, but these inquiries did not cease, and finally a thought came to his mind, "Here you might be of some service to your people." But in order to enlighten others it was necessary to enlighten one's self, so the writer connected himself with the Agricultural Department of the University of California and there received authentic information on all subjects pertaining to the climatic and agricultural conditions of the State.

An additional circumstance became a potent factor in adding stimulus to the work. Each passing year recorded a considerable number of Lutheran families from the Eastern or Middle Western States settling here and there in this vast domain. And as a result they became lost, completely swallowed up as it were, in this maelstrom of materialism and—in all matters spiritual—indifferentism, so prevalent and dominating in these regions of the Western Coast.

The object of this volume, therefore, is self-evident. Its immediate purpose is to give authentic information regarding the potentialities of soil and climate in California. And this information is specifically intended to benefit those of our brethren in other parts who contemplate going out in search of a home in this distant and to them unknown country.

Ever since the early dawn of human history man has been of a roaming nature. And westward has been his course. This migratory trait of human kind is pre-eminently true of the race from which we spring. In the course of years thousands and tens of thousands of our people have left the regions where they first settled in this great land of possibilities, some going North and some West, some here and some there. And as a consequence many of them have gone astray. In view of this condition we have a duty imposed upon us as Christians. We owe to our people that we direct them, as far as we are able to do so, in this very vital matter of finding new homes and forming new communities. This is an effectual way of promoting their true welfare—which is not only material but primarily spiritual.

An endeavor to fulfill this Christian duty is not a new departure in the history of the American church. An effort to gather friends and relatives and members of the same faith into communities has been an integral element in the upbuilding and shaping of the Christian church in this country. In reflecting on our own branch of this work, we find this to be true. The congregations of Muskego, Koshkonong, Spring Prairie, Rock Prairie, and many more too numerous to mention—the main-spring in their formation was the community element, a desire of brethren to live and worship together and a recognition of the truth that "United we stand, but divided we fall."

It is the hope and prayer of the writer that the information contained in this volume may result not only in some material value in the work of upbuilding the Lutheran Church in this part of our land, but add to the spiritual welfare of the individual as well.

Thinking it would be of interest to the reader to get a collective view of the work of the Lutheran Church in California, the author has endeavored to gather and present the material necessary for this purpose.

As it will be noticed, special stress is laid on the English missionary work in San Francisco. The reason is obvious. This missionary activity is the first effort by our Synod in the way of distinctively English Lutheran church-work. In the disaster befalling our city in 1906 this initial effort was well-nigh destroyed. But for the assistance of our brethren in the faith—particularly in the Eastern congregations—there would be no English Lutheran Church of our Synod in San Francisco today. The writer, therefore, feels that our church people should know about the rehabilitation of Trinity Church and become more acquainted with its members by scanning the pages of this volume, dedicated to the honor of all those who came to our rescue in the hour of greatest need.

A chapter, entitled "The Main Outlines of the Norwegian-Danish Lutheran Church-Work in America," will also be found in this volume. All the work of our church out here has, to a great extent, been made possible by the noble efforts and sacrifices on the part of our Eastern brethren. Our church people here, therefore, cherish a strong desire to learn more about the work of establishing our Lutheran Zion in America. In an effort to satisfy this desire the writer deemed it fitting and proper to add this chapter.

ACKNOWLEDGMENT

The author takes this opportunity of trying to acknowledge his deep appreciation to the various persons and association which have, in many ways, contributed to the compilation of the authentic and valuable data contained in this volume and which are the very highest possible authority obtainable on the subject treated.

The articles, ''Relations of California Soils to the Permanent Fertility,'' by Dr. C. B. Lipman; ''The Climate of California,'' by William G. Reed; ''Agricultural Potentialities in California,'' by Dr. Thomas Forsyth Hunt; ''Why California Leads the Entire World in Fruits,'' by E. G. Wickson; ''What California Is Doing for the World in Raisins,'' by James Madison; ''Alfalfa in California,'' by Gerald D. Kennedy; ''Opportunities in California Dairy Farming,'' by William H. Saylor; ''Dairy Instruction at the University Farm,'' by Prof. H. E. Van Norman; ''What California Is Doing in Education,'' by Hon. Edward Hyatt; ''The University of California,'' by Victor H. Henderson; ''Leland Stanford Jr. University,'' by O. L. Elliott—all these articles were received from the editors and publishers of the California Magazine, and are published herein by the direct consent of Mr. R. L. Bernier, president.

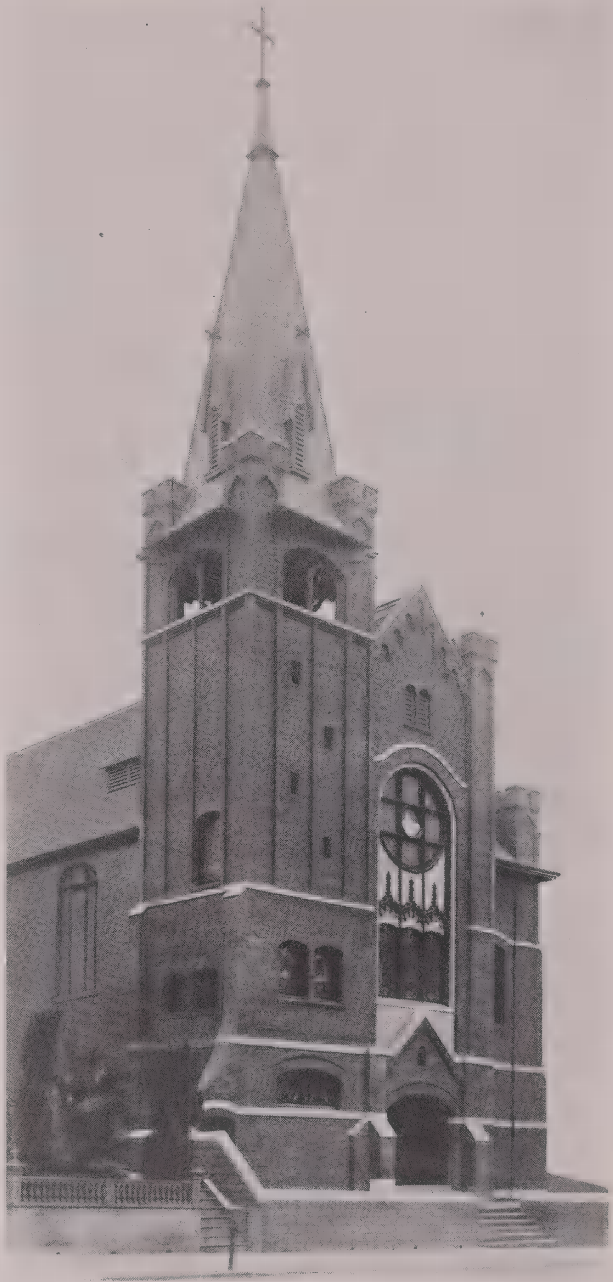
Special acknowledgment is due to the Agricultural Department of the University of California, the California Development Board, the Sacramento Valley Development Board, the San Joaquin Valley Development Association, the Chamber of Commerce of San Francisco, the Southern Pacific Company, the Western Pacific Railway, the Santa Fe Railway, the Oakland. Antioch & Eastern Railway, the Northern Electric Railway, the Matson Navigation Company, the Toyo Kisen Kaisha Steamship Company, the San Francisco and Portland Steamship Company, Marysville Chamber of Commerce, and Yuba and Sutter Counties Boards of Supervisors.

And particular mention must be made of the following named individuals: Robert Newton Lynch, Edgar Allen Forbes, Colonel John P. Irish, H. G. Squier, Dr. G. W. Shaw, H. H. Dunning, Francis Hope, F. S. Wheeler, Felton Taylor, W. S. Beard, Albert H. Antz and his workers of the Sierra Art and Engraving Company for the great care taken in the reproduction of the photographs contained in this book.

And further, in closing, the author begs leave to express his sincere gratitude to all who assisted him in collecting the material on the Lutheran Church. Besides those already mentioned he is greatly indebted to the Lutheran Publishing House, Augsburg Publishing House, Decorah-Posten, Prof. C. K. Preus, Dr. J. N. Kildahl, Prof. M. O. Wee, Attorney Joseph Brorby, A. M. Sundheim, Julius Hopperstad, Rev. Chr. Anderson, Dr. O. M. Norlie, Rev. G. A. Bernthal, Rev. O. Groensberg, Rev. Arthur Brohm, Rev. John R. Braeuer, Rev. Aarne V. Halla, Rev. Magnus A. Nordström, Rev. Th. Himle, Rev. Carl Strönme, Prof. John H. Hargens, and Rev. N. M. Ylvisaker.

Had it not been for the kind helpfulness of the aforementioned men and institutions this volume could never have been brought to completion.

THE AUTHOR.



TRINITY ENGLISH EVANGELICAL LUTHERAN CHURCH

THE LUTHERAN CHURCH

Trinity English Evangelical Lutheran Church of San Francisco, Cal.

By Dr. O. E. Brandt

[Written for the *Lutheran Herald* in the spring of 1908]

THE English work within our synodical organization is growing apace. The number of pastors who are not obliged to officiate in English, on some occasion or other, is steadily decreasing. On the other hand a constantly increasing number of our churches employs the English language, along with the Norwegian or Danish, in the training of the young and in public worship; in several of these congregations English predominates; in some it has become the official language. And of late years still another stage in this development has been reached. I refer to the organization of not a few exclusively English congregations which are affiliated with our Synod, or at all events served by our pastors. Indeed no wide acquaintance with the cities, particularly of the Northwest and the Pacific Coast, is necessary to foster the conviction that the call for more such work is urgent, and that our present number of English congregations could soon be materially increased, if we but had the laborers needed to develop only those fields which now are inviting us to enter. Even with our present deplorably insufficient supply of ministers, the prospects are that the year 1908 will register several additions to the list.

The significance of the facts here presented will become still more apparent, when we consider that hardly more than a decade has passed since our Synod for the first time entered independently upon exclusively English church-work, and gave it in charge of a pastor who should devote all his time and energy to such work only. And it certainly appears prophetic of a bright future for this branch of our work, that our very first distinctively English mission has long ago developed into a vigorous self-supporting congregation, which last summer settled in a church home that in point of size is excelled by but a few churches in our Synod, and in point of beauty and comfort by none. I refer to Trinity English Evangelical Lutheran Church of San Francisco, which has been served from the beginning of its existence until the present time by the same pastor, the Rev. E. M. Stensrud.

In view of the present status and the future prospects of our English work, even a brief sketch of the history of this pioneer English mission in our Synod may afford instruction and encouragement. And a further reason why such an article should prove acceptable is furnished by the circumstance that no full account of the dedication of Trinity Church has hitherto appeared in the HERALD a neglect, let it be said, for which a most humble apology is due from the present writer to the editor and the readers of this periodical, and in particular to Trinity congregation.

The mother church of our Synod in San Francisco, in fact, the first Scandinavian Lutheran congregation on the Pacific Coast, was the church of Our Savior's, established in 1870. During the first years of its existence the successive pastors were not permitted to confine their activity to the city, but were called to minister also to the Scandinavian colonies, which were continually springing up in the neighboring towns and country districts. During this initial period almost all their ministrations were carried on in the mother tongue. But as more laborers arrived on the field, and the resident pastor—from 1880 to 1895, and again since 1898, the Rev. O. Groensberg—was enabled to devote his time more exclusively to his city parish, it became even more necessary to employ the language of our country in the work of the church.

In the majority of Norwegian and Danish settlements in the United States the Anglicizing process is at present going on too rapidly, in our opinion. We do not, of course, object to our people learning the language of their adopted country. It is but natural and right that they should do so as quickly as possible, but we do deplore that so many cast overboard the mother tongue in their zeal for mastering the English language. For, apart from many other considerations, the statement of one of the foremost American educators will ever prove true, that "you really can not master English in any true or large sense of the word without knowing something of other languages." Particularly in view of the ease with which our children could be made to retain a knowledge of Norwegian or Danish, and to enjoy the benefits of an acquaintance with two languages, it certainly is a pity, that most children are permitted to unlearn the one in learning the other. It need not be pointed out that the abrupt suddenness of such Anglicizing is a serious menace to the integrity of family life among our immigrants, and adds greatly to the burdens which our church must shoulder. And nowhere, apparently, do our countrymen so readily abandon their old speech and adopt English as the language of home and heart as in California, and especially in San Francisco. One reason may be that the Scandinavian colony there never has been very large, when compared with our chief centers in the Northwest;

DR. O. E. BRANDT

another may, perhaps, be found in the circumstance that in the early period the greater number of settlers did not come directly from the fatherland. At all events, Our Savior's Church was soon obliged to provide English classes in its Sunday-school, and an ever-increasing number of catechumens asked for English instruction.

How to supply the spiritual wants of this host of young people, who had received all their religious training in English and for the many Americanized descendants of Lutherans, who had not been affiliated with the church—this problem, which today confronts almost every one of our city congregations, presented peculiar difficulties in San Francisco. In our smaller towns the problem is most commonly solved by providing English evening services, or by having English morning services on alternate Sundays. This method is also frequently applied in large cities, in which our Synod has several churches, each occupying a certain limited territory. But in San Francisco we had but one church, whose constituency was scattered throughout half a hundred square miles of territory. It is difficult to secure a good attendance in the evening when such distances are to be covered. Besides, Our Savior's Church has always had a very specific missionary obligation over against the large Scandinavian floating population of the city, the sailors, tourists, and transients of every kind, who prefer to worship in the mother tongue, and might not repeat their visit if they should happen in on an English service. Consider also the varied duties of the one pastor who was to serve this large population, the many calls upon his time, the distances to be traversed in the course of special ministrations, and it will readily appear that he could not in reason be expected to undertake the additional task of carrying on separate and specific English work. Still, determined efforts were made at rallying the Americanized element about a series of regular evening services; but all such endeavors fell short of success because of the many adverse circumstances indicated above, so the problem remained, and became constantly more insistent and vexing.

The true way out of this difficulty was plain. It required no great sagacity on the part of pastor and people to perceive that the whole situation called for the appointment of a second pastor, who could take charge of the English field. But to discover this obvious solution was one thing; to apply it, another. If the new man was to be an assistant, the congregation felt that it would have to furnish his salary, and its financial burdens were already taxing it to the limit of its capacity. Or, if a separate English organization were to be effected, the same question of funds would again be the stumbling-block. For the treasury of the Board of Home Missions was regularly being drained to support the Scandinavian stations; and at that time our Synod had no Board of English Work, to which a congregation in such plight could look for advice and financial assistance.

It was the providential appeal of a stout-hearted Christian woman to the president of our Synod, which, humanly speaking, saved the day for English work in San Francisco, and ultimately resulted in the founding of Trinity congregation.

MRS. ALETHE NELSON*

In the course of his remarks at the dedication of Trinity Church, Dr. Koren himself gave the following account of this memorable incident: "During a visit in San Francisco some years ago I was quite indisposed one day, and was lying on a lounge in Pastor Groensberg's study, when word was brought to me that an old lady wished to speak with me. I begged to be excused, as I was far from well; but she insisted on being admitted, and on entering told me that she had a special request to make of me before I left the city; and it was a matter of so much moment to her that she felt impelled to present it to me without delay. And what was this important matter? She said, 'In this city we must have an

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*Biography, page 11.

English congregation and have our Lutheran doctrines proclaimed in the English language. Not to do this would be a great sin which we shall rue bitterly some day. To my own children Norwegian has become a foreign langauge, and my grandchildren can not understand it at all. Will you not promise to help us out in this matter?' As I hesitated, she continued, 'You must promise this, and give me your hand as a pledge!' I replied that I did not yet see my way clear to secure the organization which she deemed so necessary, but gave her my word that I would use every endeavor to fulfill her request. This was the first seed of the great work, in which we rejoice today.''*

Our venerable president was faithful to his promise; to his wise counsel and hearty support the inauguration and the success of the work in San Francisco are due in great measure.

The ''seed'' sown by the far-seeing and pious mother in Israel sent forth its first shoot in 1896. At that time Rev. B. Harstad was temporarily in charge of Our Savior's Church, Rev. Groensberg having accepted a position as principal of the Pacific Lutheran Academy at Parkland. In response to Dr. Koren's assurances of aid from the Synod and to the urgent requests of its pastor, the congregation in that year formally resolved to establish a distinctively English department of its churchwork. Mr. E. M. Stensrud, then a student at our theological seminary, was called as assistant pastor to conduct this specific missionary enterprise. In the spring of 1897 he was formally installed by Rev. Carl Hoel, the pastor of the congregation. The installation sermon was delivered by the famous German Lutheran pioneer of California, the late President J. M. Buehler, who chose for this occasion the very significant and fitting text, ''But if any provide not for his own, and especially for those of his own house, he hath denied the faith, and is worse than an infidel.'' (1 Tim. 5, 8.)

Our young assistant pastor soon discovered that English missionary enterprise means up-hill work. A new path must be hewn out, and not a few obstacles were to be surmounted. The very circumstance that the work was to be carried on under the auspices of the Scandinavian congregation was not an unmixed blessing. There being but one house of worship to be used jointly by the two parts of the congregation, the English services, as a subordinate feature, were naturally relegated to Sunday evenings. There being but one congregation, it would be difficult to rally a special body of enthusiastic workers about the English cause, without arousing misgivings among those particularly interested in developing the Scandinavian department. It was hardly to be expected that all the older members should look with favor upon what to them might appear as something of an innovation, portentious, at that, of the wane of the language, the customs and observances which are dear to us all.

Aside from difficulties of this character, practically unavoidable in a parish, where two departments, conducted by two pastors in two different languages among two different elements, are housed under one roof, our pioneer English missionary was also seriously embarrassed by lack of the most necessary English church books and periodicals. At that time the one hymn book published by our Synod contained but 130 hymns; there was no ''Our Friend,'' no Graebner's ''Lessons'' to interest and instruct the children and the teachers in the Sunday-school; no ''Lutheran Herald'' to acquaint young and old alike with the enterprises and needs of our church; no Laache's ''Book of Family Prayer'' for use in the daily home worship; no English versions of some of the most precious works of Luther.

Nowadays the pastor who engages in English work is, in these respects, far better equipped. Still, we are yet waiting anxiously for a new, enlarged and improved edition of ''Christian Hymns,'' and, above all, for a complete Church Book and Ritual. And when we consider how deficient our Synod is in ''helps'' needed for efficient work in our parochial schools, in Sunday-schools, in Young People's societies, and in mission fields, it may not be amiss to suggest that the functions as well as the membership of our English Board should be enlarged so as to enable it to assist the Board of Publication, even as it co-operates with the Board of Home Missions.

One great hindrance to the advancement of our English work in San Francisco was eliminated on April 24, 1899, when Our Savior's Church unanimously resolved to authorize the organization of an independent English congregation, and permitted such of its members as preferred English to depart in peace. Only three families and about a dozen young people availed themselves of this permission; however, several families who had not been connected with the Scandinavian congregation joined the new organization, swelling the number of paying members to twenty-five. ''Not a very gratifying result of two years' labor,'' you may say. We beg to differ. It should be borne in mind that Pastor Stensrud during these two years had organized and served our first English congregation, St. Paul's in Oakland. But apart from that, a very rapid numerical growth at the start is not, as a rule, a healthy symptom in a church, any more than in a plant. ''A young tree should grow wood.''

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*Mrs. Alethe Sophia Nelson was born in Kristiansand, Norway, September 19, 1831, and came to New Orleans in 1846. In 1848 she married Capt. Jacob Nelson, and two years later moved to California, via Panama, living the remainder of her life in San Francisco. On February 28, 1906, she died in San Jose, and was buried at San Francisco from Our Savior's Scandinavian Evangelical Lutheran Church. Rev. Groensberg, her old pastor, and Rev. Stensrud, pastor of the church she had helped pray into existence, officiating.

Mrs. Nelson was no ordinary woman. Her strong personality and her rare mental gifts give her a place among the great women, and she was very religious. Together with her husband, who died many years before her, she was one of the founders of Our Savior's Scandinavian Church, where she remained a member and a mainstay until her death. Captain and Mrs. Nelson being childless, adopted a little girl by the name of Louise. In the course of years, she married Captain Charles J. Lucky. Two children were born to them—Karen Louise Alethe and Jacob Nelson. Losing mother in their tender years, "Grandma" Nelson took mother's place, and to these children she became a mother indeed. Her self-sacrificing work in the rearing of these children will never be forgotten by all who knew her. It was also affectionately acknowledged and gratefully remembered by Nelson and Lulu, when they arrived at the age of discretion.

The Lucky family was one of the most favorably known and highly esteemed in the Scandinavian community of San Francisco. In church circles especially will never be forgotten the part this family took in the work of the church. Though remaining a member of the Scandinavian Congregation until his death, Captain Lucky was one of the strongest advocates of an English Lutheran mission at this place. A strong argument for so being, he found in his own home—Lulu and Nelson being unable to speak his mother-tongue, whose names therefore he placed on the charter membership roll of Trinity Church which he helped to organize. The Captain died a few years ago; his son Nelson died last July; Lulu is married to a prominent engineer of the Southern Pacific Company—Hallock Bromley, residing at Los Gatos in a beautiful home built on father's and grandma's old country homestead to which she fell heir.

Hampered as the new enterprise had been by the conditions referred to, the band that had rallied around it was large indeed. And its members would be likely to prove loyal and united, welded together by one great purpose. In the church souls should not be numbered, but weighed.

The determination and discipline fostered during the trial period became manifest when the English work could develop independently. Though the new organization had no home and was obliged to be content with rented quarters, not very suitable for its purposes, its efforts during the first year resulted in a gain of no less tha 94 souls. In the succeeding years the growth was not so rapid. Still up to the time of the great earthquake a total of 250 souls joined the church, a remarkable increase under the circumstances. Another very gratifying feature of this development was the fact that almost all the new members had not hitherto been connected with any Lutheran society in the city; during the entire period after the organization less than a dozen souls were transferred from the Scandinavian mother church.

But while the progress of the cause was very encouraging, the lack of a church home was felt even more keenly. It was difficult to induce any but very good Lutherans to attend public worship in an uncomfortable hall, when stately and well-appointed American churches all around were only too glad to bid them welcome. And another disheartening feature was the expense and discomfort devolving upon the different organizations within the church, so long as they were obliged to meet and carry on their work in halls used and arranged for other purposes. Consequently every energy was directed toward securing a suitable house of worship. But the financial capacity of the organization was lamentably deficient in view of the current high prices of real estate and building material. The object to be attained appeared very distant, and the faith and courage of pastor and people were often put to a very severe test.

Finally, after three years of patient plodding, the congregation resolved to seek the aid of the Synod Church Extension. In making this appeal it could justly plead that the vitality shown by their body, the strategic importance of their work in the metropolis of the Pacific, and the prospects of wider usefulness deserved the encouragement of a loan. The appeal met with a ready response; particularly through the good offices of Dr. Koren, an appropriation of $5,000 was secured in April, 1903. This sum, together with $1,000 furnished by the congregation, was straightway devoted to the purchase of a church lot. The committee appointed to decide on the location of the future church consisted of Messrs. J. J. Olsen, Fred Miller and Pastor Stensrud. It deserves special mention because of the rare good judgment exhibited in the selection made. The lot, 60x122, is near the intersection of Howard and Eighteenth, a point easily reached from all parts of the city and the very center of the main Lutheran section. At the present time the value of this church site is estimated at $10,000.

JOHN J. OLSEN, SR.*

The substantial support given the cause by the Synod was reflected in the new zeal and energy with which the congregation set itself to the task of erecting its church home. Even before the receipt of the loan from the Church Extension, the establishment of a building fund had been formally authorized. But now the work of soliciting subscriptions was pushed with great vigor, and, owing particularly to the untiring efforts of the pastor, the handsome sum of $5,000 was pledged by the close of 1903. In the following year a like amount was subscribed.

It was in the summer of this year that the present writer, during a sojourn in San Francisco, became acquainted with Trinity congregation, its history, character and aims. I was particularly impressed with the importance and extent of the field for English Lutheran work in the city, and with the wise and deliberate forecasting of the congregation for the occupation of this field. The interest and devotion manifested by the members, and the hearty good-will with which the building project was greeted by the Lutherans of the city in general, justified me in counselling the congregation to elect a building committee and to have plans prepared for the edifice at once. In August a building committee was appointed, consisting of the pastor and Messrs. O. A. Tveitmoe, J. J. Olsen, Fred Miller and K. M. Dahl. At a later date this committee received a valuable reenforcement in Messrs. A. Sonderup and Otto Ottesen. Before consulting an architect a great deal of time and thought was expended in discussing the size, style and material of the proposed church. After arriving at a substantial agreement on these points, Architect August Nordin was engaged to prepare plans and specifications in accordance with the suggestions furnished by the committee. Those of our readers who have had experience in erecting churches will anticipate the usual thunderclap.

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*Biography, page 44.

The estimate of the architect, of course, called for an expenditure far in excess of that contemplated by the committee. More than $16,000 would be required to put up the structure, for which the committee had fondly imagined that but little more than the $10,000 in sight would be sufficient. And, in addition to this, several thousand dollars more would be required to furnish the church and make it ready for use.

But the building committee rose superbly to the occasion. Its members were convinced that the substitution of a smaller and less substantial building for the one planned would not serve the best interests of the cause. On the other hand, it would not do to cumber so young a congregation with a heavy debt. A few members, who had already contributed largely to the fund, on August 7, 1905, pledged themselves anew for a magnificent total of $5,000. This act of self-sacrificing generosity left the congregation no choice. The plans were accepted, the contract awarded, and operations begun without delay. February 11, 1906, the cornerstone was laid in the presence of a large assembly. The text selected for this occasion by the preacher, Rev. J. Johansen, of Fresno, gave an eminently fitting expression to the deepest heart-sentiment of the faithful workers, "Hitherto hath the Lord helped us." The introductory address was delivered by Rev. S. B. Hustvedt, of Oakland; and Pastors O. Groensberg and J. Schroeder brought greetings from the Scandinavian mother church and the German Lutheran churches respectively.

ALBERT THRONDSEN*

On Easter Sunday of that year the congregation moved into the commodious Sunday-school auditory of the new church, with the intention of conducting its work there until the entire building should be ready for use. We shall not attempt to picture the grateful joy with which the congregation then celebrated the Festival of Hope. For eight years they had been without a church home of their own. Now the object of their long-continued endeavors, sacrifices and prayers stood before them in concrete form. Only a few weeks more, and the capstone would be placed on their labors, when the temple reared should be consecrated to the Lord.

Three days after came the great earthquake with its many attendant horrors, dashing to the ground all these cherished plans and fond hopes. During the great conflagration which followed it appeared as though not only the new building must crumble away, but the whole organization as well. But the Triune God stretched forth His omnipotent arm to protect the church that bore His name. As by a miracle the new building was saved. The ocean of fire rolled on toward it, engulfing everything in its path; but at the rear wall of the church it made a sudden turn and passed by. And not one member of the congregation perished in the catastrophe; but a very few left the city, and the organization remained practically intact.

Still, the troubled period of reconstruction called for all the reserve faith, loyalty and courage of the congregation. The pastor and several of the members had lost all their belongings and were homeless. Even the more well-to-do were almost crippled financially. The business and labor interests of the city were in confusion, and the readjustment of all affairs threatened to be a very slow process. About one-half of the subscription to the church was still outstanding, and the prospects of collecting these sums were apparently small. A correspondingly large debt, amounting to many thousands, rested on the building, and to repair the damage wrought by the earthquake, so that the work of the congregation could be carried on there, would require an additional outlay of more than $5,000. The outlook was gloomy in the extreme, but through the grace of God the congregation stood this new test nobly and came out of the trial in triumph. All who were able to do so paid in their subscriptions, more than $4,000 being recovered in this manner. God opened the hearts of brethren in the faith throughout the land, and the gifts sent in by them covered the damage to the building, and set on their feet again those members who had lost their all. Many friends of the cause in the city itself came to the assistance of the struggling congregation, and the members themselves did all in their power to restore normal conditions in the affairs of the church.

From information gained during the writer's second sojourn in San Francisco last summer, too much can hardly be said in praise of the heroic morale shown by the building committee in these troublous times. They were all sufferers from the catastrophe to a greater or less extent, and might, without causing adverse criticism, have directed their attention exclusively to the readjustment of their own affairs. But they rallied about their dear church as one man, with a high courage and unswerving loyalty, with a self-sacrificing devotion to its interests and an indefatigable energy which served as an inspiring example to the whole congregation, and could

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*Biography, page 47.

H. L. OLSEN*

not but result in the quickening and fresh progress of the cause. Special mention should here also be made of the magnanimity shown by the contractor, Mr. Fred Miller. Very few business men suffered more severely in the great calamity than he, and he sorely needed every dollar tied up in the building to retrieve his own losses; still he never complained because of the slowness with which the payments came in, particularly during the first months after the disaster; though often pressed for funds himself, he was always patient with the church and accommodated himself to its needs in a manner which won for him the sincere gratitude of all its friends.

Many other instances of a similar spirit of sacrifice and genuine attachment to the cause of the church might be recorded, but space will not permit. The congregation as a whole manifested during this severe test a trust in God and a whole-hearted ardor and zeal, by which they gave their very best testimony to the worth of the English Lutheran cause. It is, indeed, a cheering sign to all who desire the advancement of English work, that our pioneer mission has evinced throughout the storm and stress of its early stage these typical Christian graces of faith, hope and love.

The blessing of God rests upon His own work carried on in His spirit, and Trinity congregation enjoyed a foretaste of its reward of grace when it was enabled, but little more than a year after the great catastrophe, to gather for worship in its finished church home and to dedicate it to the Triune God.

The day of dedication, July 28, 1907, will ever be a glad memory in the hearts of the members and friends of Trinity church. The weather was perfect, and the beautifully decorated edifice was more than filled with a festal throng, numbering over 600, when the service of consecration was to begin. Not only the members and their friends, with representatives of the Lutheran churches in San Francisco and Oakland, participated, but what also added greatly to the pleasure and dignity of the occasion was the presence of the president of the Synod, Dr. V. Koren, and the president of the Pacific District, Rev. L. C. Foss, and of many pastors and delegates from our churches on the entire Coast, who were attending the convention of the District Synod in Oakland. The service was conducted according to the ritual of our church. The introductory address was delivered by Rev. H. A. Stub, of Seattle, Wash. Taking as his text Psalm 95, 1-7, the speaker gave an interesting and graphic sketch of the history of the congregation—from which some features have been incorporated in this paper—and then proceeded to point out the special reasons which the congregation had for celebrating this festival with joy and thanksgiving—all this in a manner which could not but stir deeply the hearts of all and move them to worship in spirit and truth. The dedication sermon was preached by the writer, pursuant to a promise given three years before. After the prayer of consecration and the offering, congratulatory addresses, both edifying and heartening, were delivered by Dr. Koren, representing the Synod, by Rev. L. Càrlsen, our seamen's missionary, on behalf of the Scandinavian mother church, and by Rev. J. H. Theiss, vice-president of the California and Nevada District of the German Lutheran Missouri Synod. A noteworthy feature of the services was the excellent singing, for which the credit is due in great part to the pastor's wife, Mrs. Stensrud, who also presided at the organ. The well-trained choir not only rendered an inspiring anthem, but helped to give precision and vigor to the singing of the hymns. The other musical numbers, a duet by Miss Marie Sonderup and Mrs. W. Pow, and the solo by Mrs. P. Paulsen, also were of an uplifting character and in strict keeping with the solemn occasion.

FREDERICK C. H. MILLER*

After the dedication service the entire audience was invited to partake of a fine supper, served by the ladies

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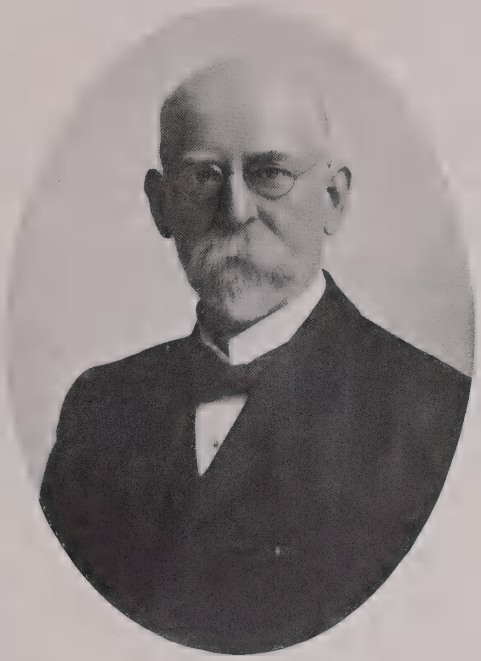
*Biography, page 45.

*Biography, page 47.



A. SONDERUP*

of the congregation in the spacious Sunday-school auditory on the first floor. And in the evening the festival exercises were rounded off in a very happy manner by a really admirable concert given by the musical forces of Trinity and St. Paul's, Oakland, under the able direction of Mr. P. J. Oksen.

Trinity congregation has every reason to be satisfied with its church home. The building is an imposing two-story Gothic structure in brick, 45x100, with a tower 123 feet in height. A broad flight of steps leads up from the sidewalk to the entrance on the ground floor. This lower story is occupied mainly by the spacious Sunday-school room, which is 13 feet high. In front of it is a wide lobby, to the left a ladies' reception room with lavatory, and to the right a gentlemen's room also with lavatory. In the rear there is a large parlor for the use of the Ladies' Aid Society, with a modern kitchen to the right, and to the left a pleasant room for the confirmation class. From the front lobby two broad stairways lead up to the main auditorium, which has a raised floor, and, together with the gallery, will seat comfortably about 500. On the pulpit side of the chancel is the good-sized vestry; on the opposite side is a space reserved for the choir, and for a pipe organ, which is yet to be provided.

The entire building is lighted by electricity, and the arrangements for ventilation, as well as the other appointments, are thoroughly modern. The furnishings are in keeping with the general character of the edifice and have been donated by individual members and by the church organizations. The comfortable pews, which cost $1,436, and the handsome carpets and draperies, worth $800, are to be paid for by the Ladies' Aid Society in four annual installments. One lady raised a substantial sum for the carpet fund. The Young People's Society pays for the altar $385, and for the organ $250. The Sunday-school provides the baptismal font, which cost $69. The payment of two beautiful windows has been guaranteed by two ladies. The small one in the front, valued at $100, represents "Gethsemane." A large one in the chancel wall cost $300 and represents the "Resurrection." The latter forms an ingenious and striking composition with the reredos of the altar, which bears the inscription, "He is risen." On the altar front there appear the words, "Faith, Hope and Charity." Thus the windows and the inscriptions together represent the sum total of Christianity.

Considering the quality of the material used throughout the structure together with the completeness and elegance of all the appointments and furniture, the total cost of the church, $23,000, is very reasonable. At the time of the dedication about $17,500 had been paid. With the blessing of God the congregation will no doubt in a comparatively short time be able to discharge all its outstanding financial obligations.

In closing this sketch of Trinity Church we join from the heart in the sentiments voiced by Pastor Theiss at the dedication: "May God bless this congregation, and may the word of God always be proclaimed here in its truth and purity. We pray that this house may thus become the house of refuge for many sinners, and that the Lord will always dwell in your midst with His peace and grace and glory. And may streams of divine blessing and comfort also ever flow from this congregation into our other churches, to the honor of God and the salvation of many souls!"

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*Biography, page 43.

Trinity Lutheran Sunday-School

By Charles M. Claussen, Supplemented by Geo. Krull

"TRAIN up a child in the way he should go; and when he is old, he will not depart from it." (Prov. 22:6.) It was with this thought in mind that Trinity Lutheran Sunday-school was started. This, however, was no easy task. The young congregation had only evening exercises, as our pastor was serving St. Paul's Church in Oakland on Sunday mornings But when the situation seemed most hopeless, God sent Rev. J. N. Andersen to St. Paul's Church, thus releasing our pastor, and on Sunday morning, November 5, 1899, our Sunday-school was organized. Thirty children responded to the first call. Rev. and Mrs. E. M. Stensrud, Miss Lydia Krull (now Mrs. Chas. Claussen), Miss Adelaide Gudmundsen, Miss Emily J. Olsen, Miss Hulda Gudmundsen, Mrs. Elisabeth Paulsen, were the first teachers, the pastor being superintendent.

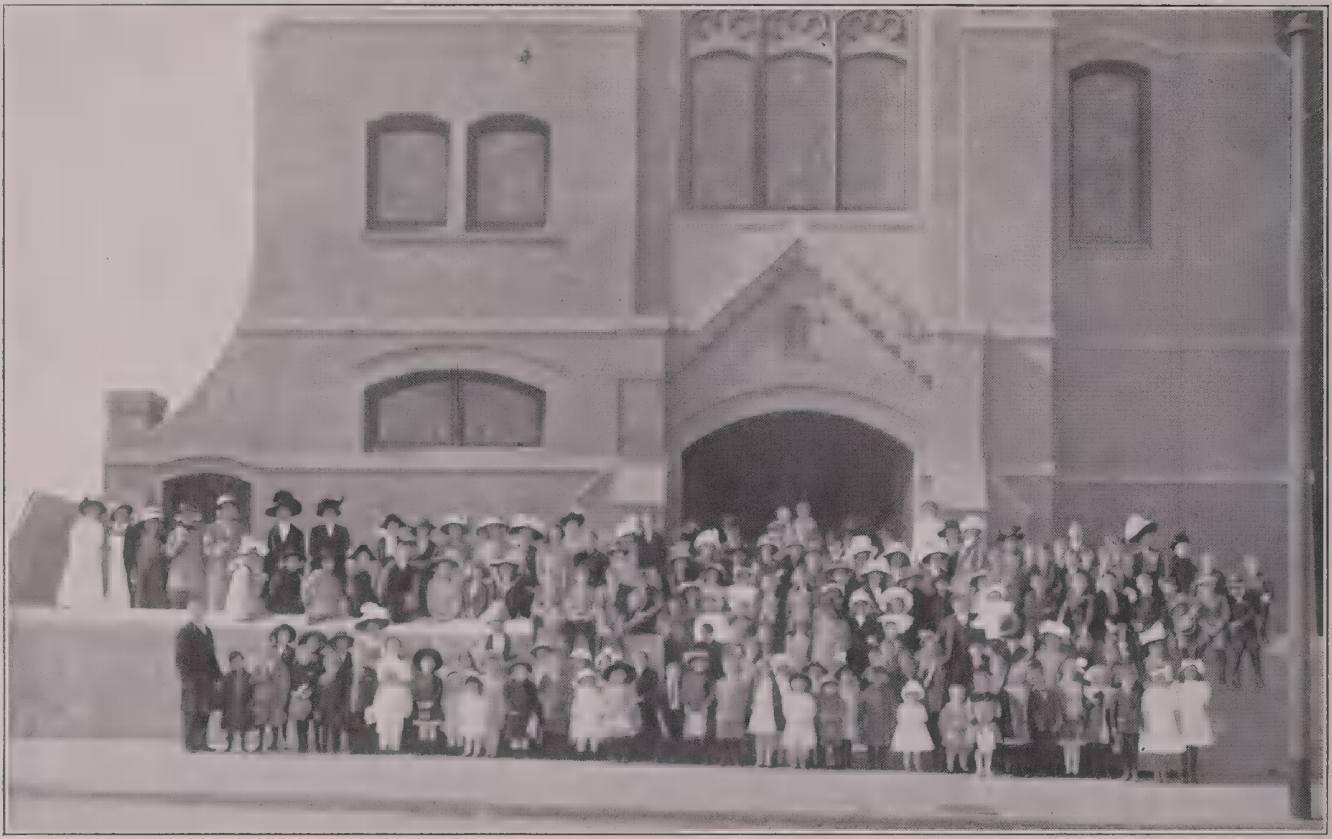
Our congregation at this time had, so to speak, no means nor any church edifice. The Mission Parlor Hall in Seventeenth Street was selected as a meeting-place, which, in view of our finances and otherwise, seemed best suited for the purpose. After we had been there a year and a half, it was decided to move to the Mission Opera Hall in Mission Street, where we continued until April 8, 1906.

At this time, our church edifice in Howard Street, between Eighteenth and Nineteenth streets, was under construction and so nearly finished that we could move into the church basement. And so on April 15, 1906, we celebrated a blessed Easter service in our own church-home. All who worshiped with us on that day will remember how grateful we were for now being able to worship in our own church. It had been extremely difficult to carry on our Sunday-school work in public halls. Parents did not approve of such places for the Sunday-school and in some cases children were not permitted to come. However, the little flock kept on steadfastly and when we left the Mission Opera Hall the attendance had increased to one hundred children enrolled, with ten teachers.

After our first Easter service in the church basement, we looked forward with longing to the next Sunday and to a new era with increasing activity in our Sunday-school, but "man's will is not God's will." April 18, 1906, the great catastrophe came. The earth shook, houses fell and, to add to the horror, fire, uncontrollable, followed up the work of destruction. Slowly but surely, the fire worked its way up to our church, and, as it stood there half in ruins, it looked as if the flames would make it a thing of the past, but God was with us, and the fire was stopped at the very church, scorching its back wall and passing by.

The dreadful days that followed will not be forgotten. People were scattered, parents separated from children and children from parents—death and destruction on every hand. Our church people, though saved from death, were deeply affected and up to May 13, 1906, we were unable to gather our children for Sunday-school. On this date we started our Sunday-school again after the fire. The debris was now so much cleared from the church that the children, by walking on planks, could reach the side door to the basement. Eight children came, and little by little, a few children were added each Sunday and in 1908 the attendance was again normal. About this time seventy-five Finnish children were added to our Sunday-school. The Finnish Lutherans were without a church home, and temporarily their children attended our school, continuing with us nearly two years. But when their own church matters were re-established, they naturally left us. We were sorry, but their duty was to their own church first.

Great difficulties were encountered in the years that followed. It was hard to get the children to attend regularly and material for teachers was scarce. The enrollment hovered around the one hundred mark and it seemed impossible to get above this number. And only an average of forty-nine could be depended on for attendance. In September, 1909, we decided to reorganize the Sunday-school with a view to increasing its efficiency. To this end, an assistant superintendent was elected, whose duty it should be to get in touch with



TRINITY CHURCH SUNDAY-SCHOOL IN 1912

the parents of children who did not attend regularly and to look after all business and improvements of the Sunday-school. However, all recommendations were to be subject to the approval of the board of teachers. The system proved a success. In 1910 the enrollment was raised to 239, with an average attendance of 92, and an average collection per Sunday of $4. This system is to this this day in effect and gives universal satisfaction.

Some years ago the Sunday-school took up the work of soliciting subscriptions for our church paper, the *Lutheran Herald*. At that time the *Lutheran Herald* had only five subscribers in San Francisco, but in a year's time we succeeded in placing the paper in about fifty homes, besides sending sample copies into nearly two hundred homes for periods of four and five weeks each.

As a means to interest our children in foreign missions, the Sunday-school has a birthday bank. At the advent of birthdays the children and teachers drop into the bank as many pennies as they are years old. At the close of the year we send it off to one of our missions.

A cradle-roll has also been organized; its object is to interest parents of children under Sunday-school age in the work of the church. This branch of the Sunday-school work deserves credit for its commendable work. At the present time the head of the cradle-roll is Mrs. George Krull.

That our Sunday-school has been a blessing, we may judge by its results. Many of our present congregation members have grown up in the folds of the Sunday-school, and through this institution our church has reached many people, otherwise impossible to reach. The Sunday-school has also been able to help the congregation financially and, like our other church organizations, it has ever been ready to extend a helping hand in promoting the Kingdom.

The Sunday-school has adopted a graded system, comprising ten grades. A child, having gone through these grades, has learned his Bible history, Catechism and the Epitome, in brief, covered all that is required of a child for confirmation. Our present enrollment is 200 children and 20 teachers and officers. Our average weekly contribution is $4.80 and our average attendance per Sunday is 90 children. Our present officers are: Superintendent, Rev. E. M. Stensrud; first assistant superintendent and treasurer, Geo. N. Krull; second assistant superintendent, Henry Ahrens; musical director, Mrs. E. M. Stensrud; organist, Rigmor Nygaard and Ingeborg Stensrud; secretary, Lilly Johnson; our present teachers, the pastor, Mrs. E. M. Stensrud, Charles M. Claussen, George Krull, Mrs. George Krull, Mrs. F. Fisher, F. Fisher, Rigmor Nygaard, Oscar Brorby, Ingeborg Stensrud, Jennette Sterud, Mrs. H. Gessler, Emma Giessler, Emilie Hansen, Esther Throndsen, F. V. A. Scott, Mrs. Ed. Larsen, Elizabeth Larsen and Mrs. Emma Higgins.

CHARLES M. CLAUSSEN*

During the sixteen years of the existence of our Sunday-school, peace and harmony did ever permeate this blessed work. Never was there a time that the teachers and officers did not work together in an effort to obtain the best possible results, nor was ever any sacrifice on their part considered too great in the work for our children.

In this connection we can not forbear to mention some of the noble workers who have spared neither time nor effort in the work to create and uphold the present high standard of our Sunday-school, and who are now not with us as teachers: Henry Olsen, John Olsen, Jr., †Mrs. A. P. Hansen, Margaret Hansen, Anna Bammann, Sam. Braunwarth, Harold Paulsen, Gustave Paulsen, ‡Mabel Johnson (now Mrs. Brorby), Ethel Johnson (now Mrs. Allan), Mrs. J. Hellingsen, Mrs. O. Bellesen, Ragna Throndsen, Martha Throndsen (now Mrs. McKay), Ethel Bollier (now Mrs. Thompson), Mrs. J. Akard, Albert Throndsen, Marie Sonderup (now Mrs. Olsen, Jr.), Clara Olsen (now Mrs. Pettersen), Sophie Hansen, Lulu Lucky (now Mrs. Bromley).

In conclusion the compilers of this article can not refrain from making one more comment and that is in regard to the work of our musical director, Mrs. Stensrud. It has been a pleasure as well as a privilege both for teachers and pupils to receive instruction in our church hymns under Mrs. Stensrud's inspired leadership. Her way of explaining the music, her spirit and zeal, the soul she puts into her work, have produced results which will bear fruit long after Mrs. Stensrud is gone.

†HANSEN AND ‡JOHNSON FAMILIES

In speaking of the deserving workers of the Sunday-school the author can not forbear making special mention of a couple of families whose names do not otherwise

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*Biography page 46.

SUNDAY-SCHOOL TEACHERS—1912

Mrs. F. B. Fisher, George Krull, Mrs. Chas. Claussen, George Larsen, Anna Bammann, Mrs. O. Lervoog, Mrs. G. Krull, Mrs. J. Akard, Ethel Johnson.
Ragna Throndsen, Albert Throndsen, Margaret Hansen, Rev. E. M. Stensrud, Mrs. E. M. Stensrud, S. Braunwarth, Lilly Johnson.
Ethel Bollier, Chas. Claussen, Mabel Johnson, Freda Miller.

appear in these columns—the Hansens and the Johnsons. Their many years' work as teachers in the Sunday-school and their missionary efforts in bringing new pupils under the influence of the Word deserve recognition.

Not least is this true of Mrs. A. P. Hansen. In the course of years many of the children who have attended our Sunday-school and were later confirmed in the church may thank Mrs. Hansen for getting them started in the good way. The name of the A. P. Hansen family also appears on the charter-membership roll of the congregation. The Hansens are among those whose absence from the church worship is a rare exception. Three children were born to Mr. and Mrs. Hansen—William, Margaret and Esther, all of whom have been confirmed in Trinity. William now resides at San Jose, Esther and Margaret at the parental home in Appleton Avenue of this city, and follow the example of their Christian parents in taking live interest in the work of the church.

Than the Johnson family no one could be more grateful in reflecting upon the establishment of an English Lutheran church in our community. Strangers in a strange city, many children growing up not learning the language of father and mother, surrounded by churches using the language of the children, they were naturally lost to the Lutheran church. In the course of time Trinity Church became known in the community as a congregation where the faith of the fathers was imparted in the language of the children—the English. This happy and significant fact providentially reached the Johnson home, nor did it take them long to decide where they belonged and where they henceforth would lend their efforts in God's vineyard. Ever since then all the Johnsons, the widowed mother and her daughters—Mabel, Lilly, Ethel, Helene—have labored diligently in Trinity Church. Mrs. Mamie Johnson, as we first learned to know her, now Mrs. Leopold Spath, has reason to be thankful because of her good children and the strong interest they take in the work of the church.

On March 25, 1914, there was a double wedding at the Johnson home. Mabel, the eldest daughter, was married to J. Oscar Brorby, who is an earnest and faithful worker in the Sunday-school and the church generally. Mr. Brorby was born in Clayton County, Iowa, December 3, 1883, and came to California in March, 1912. He is now holding an important position in the employ of the Standard Oil Company. A son has been born to Mr. and Mrs. Brorby, John Oscar. The happy couple reside in Noe Street, San Francisco.

Ethel was married to James H. C. Allan, who has also joined Trinity and is now one of its staunch supporters. He was born in San Francisco, September 16, 1892. He comes from a Christian home of the good old type. These young couples give ample evidence of the value of Christian training from early childhood and youth.

The Ladies' Aid Society

By the President, Mrs. E. M. Stensrud

IT HAS ever been woman's privilege to assist in the establishing and upbuilding of the Christian congregation. In Acts, ninth chapter, we read of Tabitha, or Dorcas, a disciple at Joppe, "full of good works," among which is mentioned that of "making clothes for the poor." Her death and her resurrection by the Apostle Peter became the occasion for the conversion of many. In the sixteenth chapter of the same book we learn that a woman named Lydia of Thyatira was the first convert of St. Paul in Europe, and thus indirectly opened the door to the Christian missions there.

In our day these Christian workers are found in great numbers—wherever the gospel message has sounded—and realizing that "In union there is strength," in the church as well as outside of it, it has become customary among us to form ladies' societies to assist the congregation in the various branches of its work.

When Trinity English Evangelical Lutheran Church was organized in San Francisco on April 24, 1899, the ladies of the church were not slow to realize their duty and their opportunity. A meeting was held at the pastor's residence, 235 Thirteenth Street, on June 8 of

MRS. E. M. STENSRUD

MRS. A. SONDERUP

MRS. J. J. OLSEN, Sr.

MRS. A. THRONDSEN

MRS. LYDIA KRULL
(Honorary Member)

MRS. OLINE BRORBY
(Honorary Member)

the same year, and the Ladies' Society of Trinity English Evangelical Lutheran Church was organized. The following were its charter members: Mrs. John Christensen, 12 Eleventh Street; Mrs. C. Johnson, 1122 Deharo Street; Mrs. J. J. Olsen, Sr., 708 Castro Street; Mrs. Lina Markman, 333 Thirteenth Street; Mrs. Dorethea Bruun, 127 Fourteenth Street; Mrs. Peter Paulsen, 15 Frankfort Avenue; Mrs. O. Bellesen, 1171 Folsom Street; Mrs. T. Mikkelsen, 1729 McAllister Street; Mrs. A. P. Hansen, 909½ Capp Street; Mrs. E. M. Stensrud, 235 Thirteenth Street; Miss Mary Hansen, 1124 Fulton Street; Mrs. L. Larsen, 57 Hardy Street; Mrs. L. Wittke, 427 Third Street; Mrs. P. Johnsen, 4222 Nineteenth Street.

The object of this organization is two-fold: To further the cause of the English Evangelical Lutheran Mission at San Francisco as connected with our congregation, and to perform such works of charity as Christian duty may require.

A committee consisting of the pastor, Mrs. Olsen and Mrs. Paulsen was appointed to draft a constitution and by-laws, which same were adopted at the following meeting held June 15, at the home of Mrs. Paulsen, with Mrs. Bruun as hostess. The officers, consisting of president, vice-president, secretary and treasurer, together with sewing and visiting committees, were duly elected. Mrs. Stensrud became president, in which capacity she is still serving. Mrs. Bruun, now deceased, was chosen vice-president, but resigned shortly, the vacancy being filled by Mrs. Hansen. As secretary we find Mrs. Paulsen, and as treasurer, Mrs. Olsen. The sewing committee consisted of Mrs. Larsen, Mrs. Mikkelsen and Mrs. Markman, and they proved to be both ambitious and industrious, for we learn that work was distributed at the

MRS. P. PAULSEN

MRS. A. ANDERSEN

MRS. J. TELLEFSEN

MRS. HUGO GESSLER

next meeting, July 13, held at the home of Mrs. Christensen. The prospect of work brought enthusiasm with it and in November the ladies were ready for their first sale, which they decided to hold on December 16. Mrs. Olsen offered her spacious and pleasant home for the occasion, and the result was most gratifying, socially as well as financially, netting the society $88.10.

The visiting, or sick committee, as it was then called, had as members, Mrs. Wittke, Mrs. Johnsen, and Mrs. Bellesen, and their duty it should be to visit the sick in our midst and to call upon new and prospective members. The fourth and fifth meetings were held at the homes of Mrs. Hansen and Mrs. Olsen, respectively. From now on, the pastor's residence became the temporary home of the society, and regular meetings were held on the second Thursday of each month until September, 1900, when it became necessary to hold extra meetings in preparation for the coming sale. In June, 1901, these became regular sewing meetings, and were held on the fourth Thursday of each month.

Encouraged by the success of their first effort, the

MISS ANNA MARIE FRIEDERICHSEN[*]

MRS. MARIE SCHMIDT[*]

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[*] Miss Friederichsen was born April 1, 1854, in Als, Denmark. She emigrated to America in 1878 and has been a resident of San Francisco for the last twenty-two years. Miss Friederichsen is one of the first members of Trinity Church and Trinity Ladies' Society. "True as the earth" is an old saying. It fittingly applies on Anna Friederichsen as a co-worker in the church and as a neighbor and friend. Her sunny disposition, her even temperament and kindliness have won for her the love and highest respect of all who have learned to know her—and they are many. May the Lord give Trinity Church many more members like the faithful Anna Friederichsen!

[*] Mrs. Schmidt's maiden name was Hansen. She was born October 23, 1862, in Forum, Denmark. In 1885 she emigrated to America. After a year's stay in Iowa she came to San Francisco. April 21, 1888, she was married to Peter P. Schmidt, Rev. O. Groensberg officiating. Two children were born to Mr. and Mrs. Schmidt, Henry Petersen and Lily Marie. Mrs. Schmidt and children have been affiliates of Trinity Church from its earliest years. Henry and Lily belong to that first little flock representing the initial efforts in the establishment of a distinctively English Lutheran Sunday-school in the Scandinavian community of this city, and they are also members of one of the oldest classes confirmed in the young English congregation. The faithfulness of Mrs. Schmidt in fulfilling her duties in God's Kingdom, coupled with her quiet and unassuming way of being, have gained for her the well-deserved place of love and respect she now occupies in the hearts of her co-workers in Trinity. She and her children reside in Seventh Street, San Francisco.

MISS ANNA BAMMANN

MRS. J. AKARD

society decided that their next must be based on a larger scale. Mission Parlor Hall, Seventeenth Street near Valencia, was secured for November 22, 23 and 24, 1900. Committees were appointed and all set to work. Seven booths were designed and made by Mr. Ericksen at a cost of $25, and we have had yearly occasion to regret the loss of these by the fire of 1906. Tastefully draped in green and white bunting and filled with the dainty and useful articles prepared by the ladies, the whole presented a most attractive appearance. With a program of the best San Francisco could offer—and shall we ever forget them, Mr. Hother Wismer, Mr. Fred Maurer, Mr. L. A. Larsen, Miss Millie Flynn, Miss Ida Diserens, and others who so willingly rendered their services whenever called upon—and a host of friends in attendance, this second venture was more gratifying than the most optimistic had dared to hope, resulting in a net sum of $513.55 for the young mission, and this barring the raffle or any kind of chance game so often employed by many other church organizations to swell the receipts.

This is now fifteen years later, and as history repeats itself, so one year has been much like the other. It might be of interest to note the financial result of our work up to the present time. Dues collected, $1,317.60; sales receipts, net, $8,132.60; miscellaneous, $241.30.

As regards the disbursement of these funds, the society has ever had its object in view, assisting in a material way those in need, not forgetting the missions and charitable institutions of our Synod, and ready at all times to promote the work of the local congregation.

Of late years, the sewing meeting has been dispensed with, as the society decided that aside from the aprons, which are an important factor in our well-stocked booths, the members donate personally the articles necessary for

MRS. C. LARSEN

MRS. R. B. HOWELL

MRS. L. SPATH

MRS. G. M. STERUD

each year's sale. So the sewing committee became an apron committee, and of this committee we are justly proud, for with the exception of a few, they supply an assortment of about one hundred aprons yearly.

But an organization of this kind is not all work, for by nature we are socially inclined, and being chiefly of Scandinavian and German stock, we all agreed, that a cup of coffee would help much to create a feeling of good-will and friendship among us. When after some months it was suggested to banish the coffee, the society decided to give that plan a trial. In fact, it was twice on trial with a two-fold victory for the coffee, but with the explicit understanding that it be served with coffee-cake only, and this arrangement has stood the test of time, for it was found to be both good and practical. However, on the occasion of the tenth anniversary of the society, which was celebrated in due style and ceremony, with the members of the Ladies' Aids of St. Paul's Church of Oakland and of Grace Church, San Francisco, as our guests, the ban was lifted and the rich cakes and pastries were much in evidence.

MRS. CARL J. HANSEN*

MRS. R. STUTE

In October, 1906, the society moved into its permanent quarters in the church, 2222 Howard Street, near Eighteenth, where the pastor and his family had located tem-

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*Mrs. Hansen's maiden name was Anna Maria Christine Louise Hermannsen. April 15, 1894, she was married to Mr. Carl Justus Hansen, Rev. H. Walser of St. Louis, Missouri, officiating. Three children were born to Mr. and Mrs. Hansen, Reinhold Bernhard, Emilie and Carl Emil. Mr. Hansen was born January 1, 1865, in Schwabstadt, Schleswig-Holstein, Germany. His parents' names were Reinhold Bernhard and Cathrine Hansen (nèe Knoop). He was educated in the state schools of Germany and emigrated to America in 1887, his objective point being San Francisco, where he has been engaged in commercial pursuits ever since his arrival.

The Hansens are diligent workers in the cause of the English Lutheran church of this city. It was most welcome news to them to learn of a local church where the Lutheran faith was imparted in the language of the children. Highly appreciated by the co-workers of Trinity is the work of the Hansens in the various branches of the church. They live at their comfortable home in Crocker Boulevard, San Francisco.

MRS. F. B. FISHER

MRS. S. BRAUNWARTH

MRS. A. P. ROEMER*

MRS. F. O. KRAUL*

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*Mrs. Roemer's maiden name was Anna Wilhelmina Wolff. August 31, 1881, she was married to Adolph Philip Roemer, Rev. J. M. Buehler of St. Paul's German Lutheran Church of this city officiating. Six children were born to Mr. and Mrs. Roemer, Alma Margarethe, Alfred Charles, Edwin William, Mabel Stella, Adolph Philip and Irene Stella. The eldest daughter, Alma, died at the age of nineteen. Mr. Roemer was born January 1, 1850, in Hesse, Germany. He received a good education in the home land, graduating from the regular state institutions. At the age of scarce twenty, he emigrated to America. After spending a few years in the Eastern States he came to San Francisco, where he has been a resident for more than forty years. The last twenty years of his life he has held a position as clerk in the United States Medical Department at Fort Mason. The Roemers belong to the early affiliates and faithful workers in Trinity Church, joining the congregation in that period of its existence when it was without a church of its own and had only public halls for worship and all other church functions. The Roemers have therefore had their share in the work of bringing our English Lutheran mission on the solid footing it now has in this metropolis. Mrs. Roemer's work in the Ladies' Society will ever be cherished in grateful memory by her co-workers in the furtherance of our common cause. The Roemers are favorably known in this community and looked upon as people in very comfortable circumstances. Their home is in Dolores Street, San Francisco.

*Mrs. Kraul's maiden name was Marie Augusta Radtke. January 15, 1890, she was married to Mr. Ferdinand Oscar Kraul, Rev. Julius Fuendling officiating. Two children were born to Mr. and Mrs. Kraul, Emil Henry and George Edward. Mr. Kraul was born November 25, 1865, in Copenhagen, Denmark. In his boyhood days he went to school in his native town, but early in life he was compelled to go out into the world and shift for himself. The seafaring life had always seemed fascinating to him, nor was he satisfied until he was privileged to sail upon the deep seas. Fourteen years of his life Mr. Kraul devoted to this vocation, visiting well-nigh every port in the world. In 1887 he decided to quit the sea and emigrate to America. Variously he has been employed since he arrived in this country, but most of the time of his residence in San Francisco he has followed the business of handling butchers' supplies.

During the formative period of Trinity Church the Krauls became members and have, therefore, been afforded an ample opportunity to share in the upbuilding of the congregation. Much credit is due them for faithful services. Mrs. Kraul's work in the Ladies' Society deserves special mention. The Kraul children have virtually grown up in the Sunday-school, Young People's Society and church where they were confirmed now some years ago. June 24, 1915, Emil, the elder son, was married to Viola Prinz, a young lady of rare gifts and refinement who some years ago also was confirmed in Trinity. George, the younger son, joined the United States Navy and is carving out his fortune in the distant isles of the Orient. The Krauls reside at their own home in Dolores Street, San Francisco.

MRS. CHAS. CLAUSSEN

MRS. J. J. OLSEN, Jr.

porarily, being rendered homeless by the catastrophe of April 18. There is no record of an April meeting of that eventful year, but on May 10 the ladies assembled at the home of Mrs. A. Sonderup, 741 Capp Street, and resumed regular work, meeting at the homes of various members during the summer. At present the society consists of forty-two active and two honorary members. Its officers are as follows: President, Mrs. E. M. Stensrud; vice-president, Mrs. A. H. Pettersen; secretary, Mrs. J. J. Olsen, Jr.; treasurer, Miss Anna Bammann;

MRS. A. H. PETTERSEN

MRS. H. N. SCHROEDER

MRS. G. KRULL

MRS. WILLIAM OLSEN

MRS. H. SMITH

MISS HANNAH SELSVOLD

MISS MARGRETHE SONDERUP

MRS. G. HANSEN

MRS. H. SCHROEDER

visiting committee, Mrs. Chas. Claussen, Mrs. A. Throndsen, Mrs. A. Andersen, Mrs. H. Smith; apron committee, Mrs. J. J. Olsen, Sr., Mrs. A. Sonderup, Mrs. A. H. Pettersen, Mrs. J. J. Olsen, Jr., Mrs. G. M. Sterud, Mrs. G. C. Walkmeister, assisted by Mrs. Ed Larsen.

We hope and pray that the good feeling which has always existed among us will continue and that the Lord will bless the work in the future as He has in the past!

THE YOUNG LADIES' SOCIETY

Shortly after the organization of the Ladies' Society, the young ladies of the church met and formed a similar organization, which during its short existence assisted materially in the work of the young church. When necessity called forth the organization of the Young

MRS. O. BELLESEN

MRS. J. HELLINGSEN

MRS. H. L. OLSEN

MRS. F. FRANK

MRS. H. BROMLEY

MRS. C. THOMPSON

MRS. J. LINESS

MRS. H. N. LORENZEN

MRS. E. ERICKSON

MRS. E. E. HUSEBY

MRS. O. LERVOOG

People's Society, the young ladies decided to join their efforts in making it a success, and therefore discontinued their work as a separate body. A communion set was their special gift to the church.

The Young People's Society

By Thoralf O. Throndsen

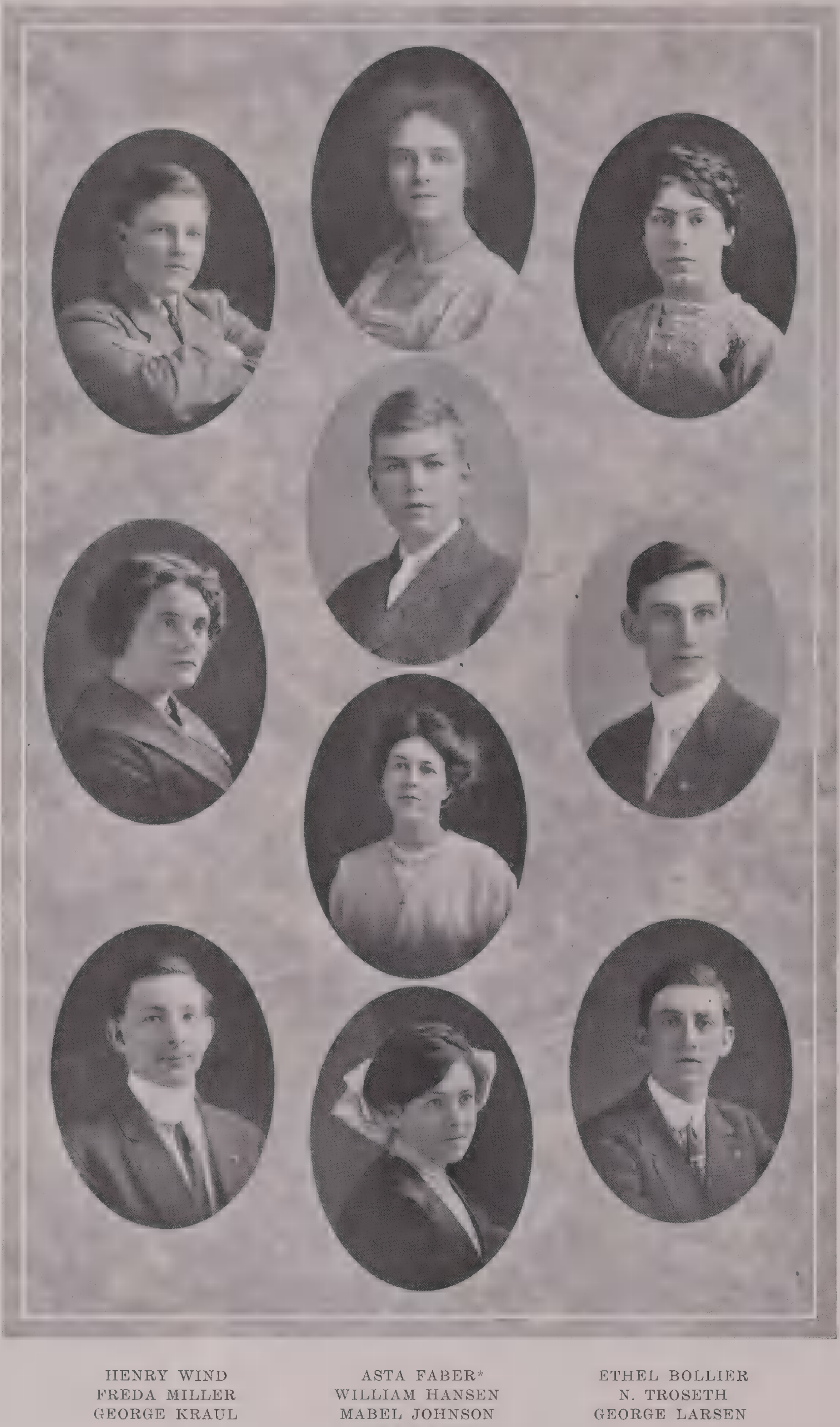
THE Young People's Society of the Trinity English Evangelical Lutheran Church was organized on October 2, 1900, and elected officers as follows: Rev. E. M. Stensrud, president; Mr. C. Claussen, vice-president; Miss Sophie Hansen, secretary, and Miss Lulu Lucky (now Mrs. Bromley), treasurer.

The object of this society is to promote the moral, literary and social, as well as the religious faculties of its members. The society has depended for new members chiefly upon the confirmation class. In the course of years intimate friends of members have applied for admission, when they have heard of the pleasure enjoyed by those already enrolled. A limitation in the admission of new members was felt necessary to prevent the slightest existence of outside dangerous influence. To accomplish this end an amendment to the constitution was made. Instead of admitting applicants on the reference of members, strangers are placed on probation for one year, unless they have been confirmed in a Lutheran church and come recommended by their former pastor. During probation year a prospective member must be a regular attendant at divine service, and further, he must be present at the regular meetings of the society; he has a voice in the meeting but pays no dues, has no vote and no privilege to make or second motions. In this way the society is able to get a fair knowledge of the character of its members, as faulty probationers are not admitted.

Regular meetings of the society are called in the church parlors on the first and third Tuesday of each month, unless otherwise ordered. Every meeting is started with devotional exercises by the pastor, who is present at all the meetings. After the devotion is over, regular business is conducted under parliamentary rules. Business of the society consists in communications from individuals and other Lutheran Young People's Societies, new business in regard to future literary and social arrangements, old business consisting chiefly of committee reports on events having been arranged or completed. When all business is finished, a sociable evening is spent in various ways.

The literary advancement of the members has been conducted, mainly, in entertaining ways. Probably the most instructive and interesting feature in this form has been debating by sides comprised of members only. Many of the debates have been held for the pleasure and instruction of members, but occasionally their friends are invited, as well as all others affiliated with the church. Wholesome amusement is provided by different members, who render selections on musical instruments or vocally by song and recitation. Humorous dialogues and effective tableaus add a pleasing variety to many other well-received renditions.

A solid groundwork in Bible and Church History has been acquired by the society, through the efforts of our pastor. In the course of years, a few minutes at each meeting, he has lectured on the life of St. Paul and Martin Luther, and also on the most important periods of church history, on false doctrines besieging the Truth in an endeavor to extinguish the light on the road to salvation.



HENRY WIND
FREDA MILLER
GEORGE KRAUL

ASTA FABER*
WILLIAM HANSEN
MABEL JOHNSON
ALMA HANSEN

ETHEL BOLLIER
N. TROSETH
GEORGE LARSEN

*THE FABER CHILDREN

The writer can not forego a mention of the Faber children. Clara and Asta, whose pictures appear in the Young People's groups on these pages, belong to a family of nine children, six girls and three boys. Their names, according to age, are as follows: Magdalena Sophie (now Mrs. Hoffmeyer), Clara Christa, Asta Thusnelda (now Mrs. Tuggy), Carl Gunnar Gotfred, Mathias Joergen, Eliazabeth Gertrude, Eva Marie Sigrid, Olga Francisco and Knud Halvor. All but the last two have been confirmed in Trinity Church and, in the course of years, they have augmented the number of Sunday-school pupils. Most of them, too, have been christened by the pastor of Trinity. Trinity Church was primarily established as a spiritual home for children and young folks of Lutheran parentage, and the results, as they now appear, show that it has not been love's labor lost, for Trinity is now a church consisting mostly of children and young folks, busily engaged in the labor of the vineyard. In this number belong the Faber children. And much credit is due them for their noble efforts.

Mr. Fred Faber, Sr., was born August, 1854, in Copenhagen, Denmark. In 1883 he emigrated to America and a year later arrived in San Francisco, where he has been a resident all these subsequent years. July 21, 1884, he was married to Anna Brinck (from Odense, Denmark). Rev. O. Groensberg officiating. Mr. Faber has distinguished himself as a successful business man, and is at present the proprietor and manager of an extensive grocery business located in Twenty-fourth Street, where he, together with his family, resides.

EDMOND HOLM
CLARA FABER
EMMA GIESLER

EMIL KRAUL
ANNA CHRISTENSEN
THORALF THRONDSEN
OSCAR BRORBY

HARALD PAULSEN
MARTHA THRONDSEN
ELSIE STURCKE

JENNETTE STERUD

As a financial aid, the society has been a valuable asset to the church. The source of income has been in the collection of dues at 25 cents a month for each member and through entertainments with a musical program and the serving of refreshments at nominal charges. Thus the treasury has always controlled moneys used for the benefit of the church. Two especially profitable affairs, given under the auspices of the society, were the concerts at Lyric Hall in 1905, and at the Fairmont Hotel in 1909, respectively netting $300 and $600. The profits of numerous small entertainments at the Sunday-

MARTIN STERUD

EDA SCHLICHTMANN
EUGENE PONCET
ETHEL JOHNSON

LILLY JOHNSON
LEE AKARD
CLYDE AKARD
HERBERT MILLER

ADELAIDE PONCET
ADOLPH WIND
RAGNA THRONDSEN

school auditory and the surplus in the treasury after other donations and current expenses were paid, totaled an additional $800. Other donations referred to were used for the payment of a piano and organ for the church. During the past eight years, at the sales held by the Ladies' Aid Society, a booth has been conducted and taken care of by the young people and the profits given to the church fund.

The society, being an advocate of physical as well as of mental development, has equipped the church basement with gymnastic apparatus for the use of the members. In order to systematically develop muscles, a former member of the society, in the person of Dr. N. Troseth, has volunteered to assist in the work, and with his professional advice and service improvement is going on rapidly.

During the past year activity has not been so brisk as usual on account of the Exposition, but at present thirty-five hard workers are enrolled ready to redouble their efforts during the coming year. The officers at present are: Mr. Adolph Wind, president; Mr. Peter Grapengeter, vice-president; Miss Ingeborg Stensrud, secretary, and Miss Jennette Sterud, treasurer. The Reverends Stensrud, Borup and Borge and Mrs. Stensrud are honorary members. Through the efforts of our pastor the society has reached a point where it is an important factor in the church and community round about us.

Facts and Figures in the Growth of Trinity English Evangelical Lutheran Church

By Henry L. Olsen, 1899-1910, and John J. Olsen, Jr., 1911-1916.

JOHN J. OLSEN, JR.*

THE congregation was organized April 24, 1899, at Our Savior's Scandinavian Evangelical Lutheran Church in Howard Street, near Thirteenth, where divine services were held Sunday evenings until November 5, when the young congregation moved into Mission Parlor Hall in Seventeenth Street.

Charter-members were: Rev. E. M. Stensrud, T. Tellefsen, John J. Olsen, Sr., Fred Miller, J. N. Lucky, O. T. Tonnesen, H. L. Olsen, Chr. Tellefsen, C. Markman, Capt. A. B. Gudmundsen, Capt. O. Bellesen, Emanuel Bensen, Mae Sivertsen, Bertha Aarreberg, Alfrida Pettersen, Oscar Olsen, Lena Andersen, Louis Larsen, A. P. Hansen, Capt. M. Mikkelsen, H. J. Schroeder, Martin Johan Sivertsen, Chas. John Bye, Ingeborg M. Nielsen, Capt. J. S. Hellingsen, Charles Olsen, Lydia Krull, H. M. Smith and Nelson Toft.

Church activities otherwise centered in the organization of a Sunday-school, a confirmation class, a Young Ladies' and a Ladies' Society. All other meetings than church services and Sunday-school were held at the residence of the pastor, 235 Thirteenth Street. A sale in a small way was held at Mr. J. J. Olsen's basement, 708 Castro Street, toward the end of the year.

The principal sources of income were: Dues, $158.25; collections at services, $130.40; total for year, $288.65.

Disbursements: Minister's salary, hall rent, home mission, choir leading and incidentals. Assets at end of year, none.

1900.

Regular services at Mission Parlor Hall every Sunday morning. A Young People's Society organized in the month of October.

The principal sources of income: Dues, $301; collections at services, $162.45; Young Ladies' and Ladies' Society donation, $67. This year a special fund was started with the object in view of acquiring a church site. To this fund, known as the Lot Fund, the two ladies' societies contributed $500, the proceeds of the first public annual sale.

The principal disbursements: Minister's salary, $340; hall rent, $90; choir leading $47.50; hymn books, $29; home mission, $6; incidentals, $39. The $500 donated by the ladies was placed in the bank and became the church's asset at the end of the year.

1901.

During this year the Young People's Society entered actively into working for the congregation. Regular services were held in one of the lower halls on the premises in Seventeenth Street. Some years have elapsed now since that time, but in our memory lingers the fond recollections of the good attendance in that quiet and cozy, yet commonplace, accommodation for our church services.

The finances showed good increase all around during this year. The Young People's Society helped with $67, of which $25 went to the Church Lot Fund. The regular expenses were duly met and with the closing of the year the Church Lot Fund had been augmented by the addition of $400, chiefly through the work of the Ladies' Society. The total sum in the fund was now $900.

1902.

This year found the congregation holding its services in the old well-known Mission Opera Hall in Mission Street near Seventeenth. Worshiping in a dingy hall year in and year out required steadfastness of purpose and faith in our cause. There was nothing of the spasmodic element in our work. A faster growth would have been encouraging, yet we were led by a spirit of optimism and never was there any dissension. During the year the regular contributions for the running expense and the extra efforts working through the medium of the Ladies' Society for the Lot Fund showed a steady increase. The cause of our English Lutheran Church work was gaining in interest. The amount in bank was $1,528 at the end of this year.

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*Biography page 44.

1903.

This year embraced progress in a material sense. Interest in concrete form on part of the members was manifested, when the Church Extension of the Synod of the Norwegian Evangelical Lutheran Church of America extended a loan, without time limit and without interest, in the sum of $5,000. This was to be used in acquiring a church site. Adding $1,000 from the amount held in the bank, the lot on which the present church now stands was bought for $6,000. With such aid from the Church Extension our congregation was not behind in following up this event with a subscription list for the benefit of the church building fund. During the year the sum of $1,375.25 was promised or given outright by members and friends of the cause. Our church was incorporated in 1903. Incidental and regular expenses were all met. In view of a church site acquired and the building fund well started, our congregation had much to be thankful for this year.

1904.

In noting the status of the church organization during 1904, we find that the congregation had 33 active contributing members. The Young People's Society is credited with 20, the Ladies' Society with about 25. Although the Sunday-school had an enrolled membership of 82, the average attendance was but 30, with 7 teachers. Though showing but little growth for this period of more than four years, yet it may be said that the congregation had stood firm and solid under somewhat adverse conditions. During the year the running expenses, in the sum of $708, were met with the ordinary receipts. The subscription to the church building fund was increased by the sum of $1,383 from individuals and $600 as a result of the Ladies' Society's annual sale and, interest on money in bank, $53.70. The resources of the congregation at the end of the year were $9,704.45, less the mortgage of $5,000.

1905.

This year is noted in the records of our congregation for the adoption of plans and specifications, letting of the contract for, and toward the end of the year commencing, the erection of a church edifice. The groundbreaking, informal though it was, gathered many persons, chiefly mothers and children. This was a day to be remembered as it marked an occasion fruitful of much thought upon efforts past and efforts yet to come. But under the clear sky of that sunny day of August 26, all felt thankful and glad in view of the fact, that God had helped in the acquisition of a church site and a goodly sum of the means required for a church edifice. Naturally money matters were strained to the utmost,

CONFIRMATION CLASS—1905-06 (Left to right)
Howard E. Beneleit, Martin T. Schmidt, Minnie M. Rasmussen, Anna Marguerite Hansen, Louisa B. Schnitzer, William A. Springer.
Frieda M. Toft, Emil H. Kraul, Angelo Z. I. Tweitmoe, William C. Hansen.
Nelson V. Toft, Rev. E. M. Stensrud, Floyd A. Cushing.
Magdalene M. E. Krull, Julia C. S. Tellefsen, Charles A. Springer, Ethel E. Bollier, Lily M. Schmidt, Harry M. Smith.
Ruth Peterson, Freda M. Rasmussen.

as we had agreed to a cost of a structure in the sum of over $16,000. The receipts for the running expenses during the year were $589.05. The disbursements were $594.85, leaving a deficit of $5.80.

1906.

This year, the year of the great catastrophe to our city, witnessed great damage to the partially-built church edifice. The earthquake, with its destruction and the fiery devastation following, affected directly or indirectly everyone who had been within its reach. In our case great plans at the most critical period of our church-building project fell to the ground, for the time being at least. The structure was saved from the flames and it proved to be a consolation that the basement part of the building, after some temporary repairs, could be used for services. It afforded an opportunity of coming together for worship. Thus we were imbued with courage to take hold of the repairs and finally to push the building to completion. But our financial ability was by no means equal to the occasion. Our Synod, however, came to our rescue by furnishing the necessary funds for repairing the much-damaged structure. Later on in this narrative the reader will be enabled to see, in the summing up of things financial, how the church finances were rehabilitated. We give God all praise and honor who saved us from destruction, individually and as a congregation, and blessed our humble efforts in rearing a temple to His glory. The monthly dues received during this year were $297.50, collections at services, $176.20. The urgent need of the time necessitated drawing a little of the money in the bank for the running expenses—$136.25. A donation of $58.75 from the Young People's Society, and $25 from miscellaneous sources, added to the regular contributions, gave the sum necessary for the running expenses. Under the following heads the money was used: Minister's salary, hall rent, taxes, home mission, janitor service, incorporation and insurance.

CONFIRMATION CLASS—1906-07 (Left to right)
Herbert A. Holm, Alice Peterson, Henry Dahl, Ingeborg E. Tweitmoe, Soren Dahl, Agnes L. Lunde.
Asta T. Faber, Anna Dahl, Rev. E. M. Stensrud, Mathilda C. Holm, Alma Welch, George F. Larsen.
Martha S. Throndsen, Anna C. Christensen, Elin N. Olson, Tessie L. Finsterbush, Ruth Sonderup, Lily A. Hansen.
George A. Hall, Anna M. Holm, Frieda Hermann, Harald H. Paulsen, Jennie J. Halvorsen, John A. O. Olson.

1907.

As the year previous was noted for its many adversities, so the year of 1907 will be remembered as a period of many important events in our church life. We saw our church building completely finished and dedicated. It was largely by the self-sacrificing efforts on the part of a few members of the building committee that this event was consummated. These men made good their subscriptions pledged before the catastrophe. Many other subscribers, too, stood by their obligations. Labor was a little hard to be had at that period, therefore slowly did the veneer bricks rise on the walls in place of the crumbled masonry. The interior finish was completed toward the summer. Our goal had been reached, the result of years of hard work had been accomplished. We had a church edifice of our own. Here let us review receipt and disposition of funds from the beginning of the building operations:

Amount on hand, January 1, 1905	$ 3,798.66
Receipts in 1905	2,147.95
Total	$ 5,946.61
Disbursements during year 1905	3,159.60
Amount on hand, January 1, 1906	$ 2,787.01
Receipts in 1906	7,800.94
Total	$10,587.95
Disbursements during year 1906	8,946.20
Amount on hand, January 1, 1907	$ 1,641.75
Receipts in 1907	7,978.20
Total	$ 9,619.95
Disbursements during year 1907	9,519.95

Ordinary receipts and expenditures for 1907: Received from membership due, $337.25; from collections at services, $260.60; from Young People's Society, $20; from miscellaneous, $15.25; total, $633.10. Disbursements: To minister's salary, $569.45; to janitor, $53; to gas and electricity, $45; to home mission, $17.65; total, $685.10.

CONFIRMATION CLASS—1907-08
(Left to right)
Bertha M. Thygesen, Louisa M. Schumacher, Harry W. Thygesen, Mabel S. Roemer, Ethel M. Johnson.
Napoleon A. Troseth, Adeline Poncet, Rev. E. M. Stensrud, Ragna A. Throndsen, Freda I. Miller.
Johannah M. Wind, Vera W. Sundberg, Henrietta M. Feldermann, Florence H. Miller, Annette H. Sundberg.
George E. Kraul, Alfred A. Sivertsen

1908.

As might well be expected the financial status of the congregation was at this juncture quite strained. The all-absorbing problem was now, How shall we meet our obligations? During 1908, a few loans from kind friends were negotiated. Our subscription list had reached as far as it could for the present. Through the ladies' annual sale quite an amount was realized this year—in all $1,500 net. The regular expenses of the congregation were duly met. The following are receipts and disbursements in connection with the newly built church:

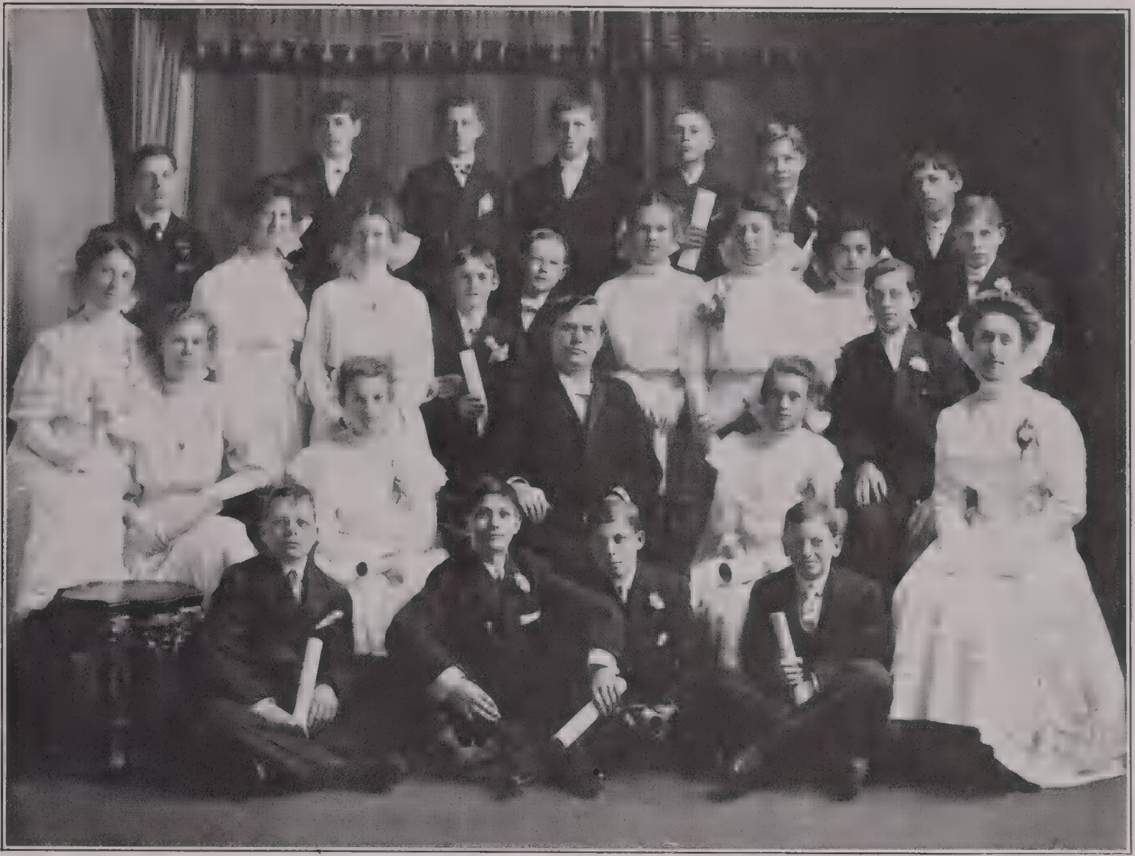
Amount on hand, January 1, 1908	$ 100.00
Receipts in 1908	2,591.05
Total	$ 2,691.05
Disbursements during year 1908	2,609.55

1909.

To continue from above the following receipts and expenditures in relation to the church property are noted:

Amount on hand, January 1, 1909	$ 81.50
Receipts in 1909	1,102.34
Total	$ 1,183.84
Disbursements during year 1909	1,182.97

In summing up the activities of the church during the year 1909 the increase in church dues and in church service collections show a growing interest in the work. The benefits of having a new church-home is already being felt. With pleasure we note a concert under the auspices of the Young People's Society netting some $400. This sum was applied to meet a portion of our obligations. The ordinary receipts were: Dues, $457.25; service collections, $307.45. The ordinary expenses covered minister's salary, $743.60; gas and electricity, $59; water, $18.



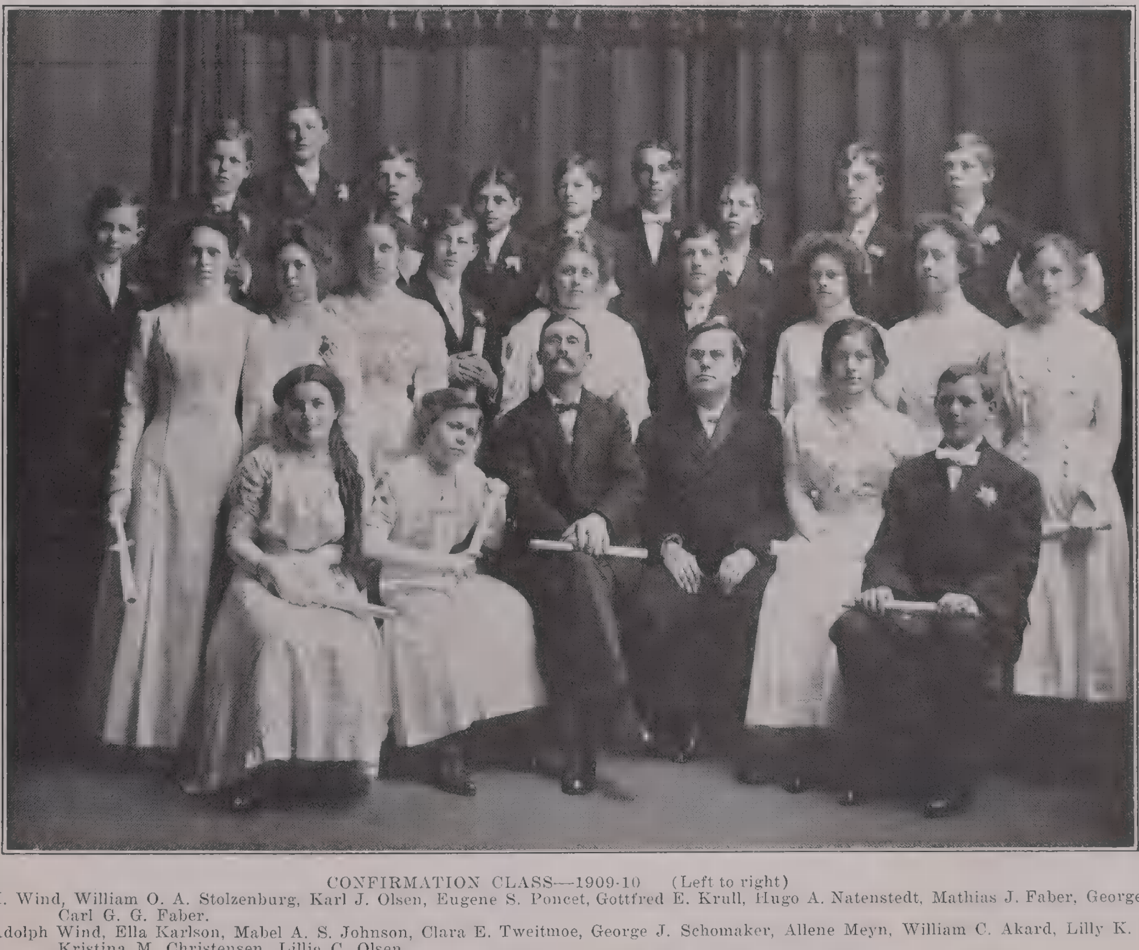
CONFIRMATION CLASS—1908-09 (Left to right)

Edmund O. Holm, Elmer C. Anderson, Herbert J. Vind, Andrew M. Thomsen, Carl J. Anderson, Gustav H. Paulsen, Helmer Halvorsen.

Edna C. Toft, Agnes O. Petersen, Kathryn H. Thomsen, Thor Aarreberg, George W. Toft, Ruth F. Lunde, Stella L. Schlichtmann, Ellen E. Andersen, Harold B. Hansen.

Esther K. Hansen, Elenore S. Papenhausen, Rev. E. M. Stensrud, Lillie E. Papanhausen, Arthur M. Hansen, Mathilda L. Verhagen.

Thomas A. Olsen, George A. Troseth, Merrill G. Cushing, Charles A. Bramsen.



CONFIRMATION CLASS—1909-10 (Left to right)

Peter H. Wind, William O. A. Stolzenburg, Karl J. Olsen, Eugene S. Poncet, Gottfred E. Krull, Hugo A. Natenstedt, Mathias J. Faber, George Schomaker, Carl G. G. Faber.

Soren Adolph Wind, Ella Karlson, Mabel A. S. Johnson, Clara E. Tweitmoe, George J. Schomaker, Allene Meyn, William C. Akard, Lilly K. Johnson, Kristina M. Christensen, Lillie C. Olsen.

Thyra C. Sorensen, Ida H. Christensen, Frederick B. Fisher, Rev. E. M. Stensrud, Edna F. Christensen, Henry A. Larsen.

CONFIRMATION CLASS—1910-11
(Left to right)
George L. Springer, Karl E. Edhammer, Herbert W. Springer, Herbert H. Miller, Peter D. Olsen, Emil A. Anderson.
Thoralf O. Throndsen, Maggie L. Akard, Hazel B. Gabb, Viola K. Prinz, Ruby C. Daiss, Arthur A, Andersen, Ida M. Schlichtmann.
Alma H. Hansen, Rev. E. M. Stensrud, Ernst N. Krull, William H. Papenhausen, Irene M. Klipstein, Martha C. F. Stute, Ada E. Klipstein.

1910.

This year the records of the church show no subscriptions to the building fund. There has been a little breathing spell after some very pressing debts were paid. In regard to ordinary receipts and expenditures it always turned out so that we came out even at the end of the year. It is, however, a case of being up and doing. A minor festival is gotten up which helps financially. In 1910 the time had come when renewed efforts had to be made to discharge our obligations. There was much detail and planning as to how this might best be accomplished. During the year 1910 the beginning was made and the Church Debt Liquidation Fund started with $295. This was the commencement of a new subscription plan following not far from the closing of the old building fund. The last payment of the church pews was also made this year by the Ladies' Society. The amount on hand in the building fund at the end of the year was $10. The following are the sums received during 1910 from fifty-one persons:

Amount on hand, January 1, 1910	$ .87
Receipts in 1910	1,741.83
Total	$ 1,742.70
Disbursements during year 1910	1,732.70
Amount on hand, January 1, 1911	$ 10.00

1911.

The status of the congregation for this year is as follows: From membership of 49 was collected $492.45 in dues. The Ladies' Society of 40 members contributed $554.37. This, together with church collections, gave total receipts in the sum of $1,601.60, with a cash balance of $33.36. The total liabilities of the congregation at the end of the year amounted to $11,149. Of said sum, $6,140 was interest-bearing at the rate of six per cent per annum and $5,000 non-interest bearing, being a loan of the Church Extension.

During this year the Young People's Society was very active, buying a piano for the church basement and starting a gymnasium fund.

Special mention is due Mr. Chas. Claussen for diligent work in the Sunday-school.

This year Grace Church, a mission emanating from Trinity, started to build its own house of worship.

1912.

The total collection for this year was $1,647.93, of which the Ladies' Society donated $564.59. The principal disbursements were: Minister's salary, $750; janitor, $120; interest on notes, $118.35. A cash balance of $370.27 remained at the end of the year.

A joint mission festival in the form of an outing was held at McNear Point, in which all the sister congregations around the bay participated. An offering for the missions was taken up.

A gratifying feature of this year's church work is the large number of young folks seen at regular church services. It must be remembered that this church was started primarily for the young folks.

The good work of the Sunday-school continued this year. A total collection of $382.22 is noted in the annual report.

DORCAS SEWING CIRCLE—1910-13

For the past two years we have had in our midst the "Dorcas' Sewing Circle," consisting of small girls instructed by Mrs. E. M. Stensrud and assisted by other ladies, among whom worthy of special mention is Mrs. H. Gessler. This society has been doing good missionary work in the community.

CONFIRMATION CLASS—1911-12
(Left to right)
Mildred A. Toft, Ethel G. Koeberer, Else A. Sturcke.
Clara D. Hansen, Henry J. Toft, Martha L. Halvorsen, Oscar J. Husby, Roscoe B. Bollier, Maja M. Nielsen.
Monroe P. H. Diederichsen, Minna M. Hahner, Rev. E. M. Stensrud, Gertrude E. Faber, Elsie M. Hansen.

During this year an opportunity presented itself, in the enlargement of the book, "California and the Lutheran Church," now being compiled by our pastor, looking to the liquidation of our Church Extension debt. The original objective had been only to liquidate the interest-bearing debt.

1913.

This year marks the introduction of the duplex envelope system into our finances. The total collections for the year were $2,385.82. Of this the Ladies' Society donated $579.30; the Sunday-school, $183.30; the Young People's Society, $80; the Dorcas' Society, $24, and $135 from individuals.

CONFIRMATION CLASS—1912-13 (Left to right)

Roland F. Holm, Walter A. Hartje, Frank A. Schnitzer, William Grapengeter, Palmer E. Edhammer, Fritz Grapengeter, Edwin O. Olsen.
Myrtle L. Larson, Agnes J. Jorgensen, Carl E. Hansen, Lillian N. Hellingsen, Idith H. Oftedahl, Emilie Hansen, Peter J. C. Grapengeter, Selma M. E. Solvin.
Rigmor G. Nygaard, Olga H. C. Smith, Alice A. Christensen, Esther C. Throndsen, Emma J. B. Stute, Rev. E. M. Stensrud, Irene H. A. Jensen, Ingeborg O. Stensrud, Addie P. Akard.

The principal disbursements this year were: Minister's salary, $1,200; donations to various missions, $250; interest, $180; insurance, $107; janitor, $122.50.

The church attendance showed a firm and steady growth. The Sunday-school was very active, having an enrollment of 204 children and 20 teachers. An average attendance of 99 had been maintained with an average collection of $3.87 per Sunday. The Sunday-school this year was able to give $15 a month for local church purposes. Our Birthday Bank has become dear to our children, each child at its birthday depositing as many pennies as it is years old.

1914.

This year does not emphasize any one feature of the work in particular, but marks a good and steady increase all round. The church attendance was the largest in the history of the church, in itself an evidence of substantial headway.

During our pastor's serious illness, his place was filled for several months by Rev. D. J. Borge. Through the kindness of Rt. Rev. J. Nordby, Rev. Borge, his assistant, was granted a leave of absence in order to help us out.

The financial statement for the year is as follows: Total collections, $4,175.40, of which the Ladies Society donated $580; the Young People's Society, $62.50; the Sunday-school, $162.95. The disbursements were: Minister's salary, $1,300; janitor, $146.70; home missions, $96; $2,000 to Mr. Miller; the balance was applied on other outstanding obligations.

The Young People's Society shows continued activity, increasing its membership and purchasing gymnasium apparatus, in addition donating $62.50 to the congregation.

The Sunday-school shows an enrollment of 176 children and 20 teachers and an average attendance of 101. The "duplex pink envelope" was introduced in the Sunday-school with good results.

1915.

This was the year of the great World's Fair, namely the Panama-Pacific International Exposition, held at

CONFIRMATION CLASS—1913-14 (Left to right)

Oscar E. Solvin, Frederick R. Braunwarth, Walter H. Schlichtmann, Henry T. Ahrens, Chester W. Christensen, Adolph P. Roemer.
Anna E. A. Sturcke, Oscar C. Johnson, Hedwig I. F. Nieland, Sophia D. Toft, Martha I. Luhrs, Henry J. Halvorsen, Eva M. S. Faber.
Stella B. S. Ross, Edna F. Carrillo, Helen A. Toft, Rev. E. M. Stensrud, Edna K. Selk, Lititia R. C. Jensen, Adelheid M. Luhrs.

CONFIRMATION CLASS—1914-15 (Left to right)

Edward H. Luhrs, Oliver B. Bellesen, George H. B. Hansen, Roy C. Bellesen, Harry F. Meyer, Russell Kruse.
William E. Horstmeyer, Leslie K. Sorensen, William J. Hartje, Olga C. Ericsson, Edna A. Nielsen, Werner H. Diederichsen, Edward T. Ritter, John F. Akard.
Meta E. Hartje, Ruby A. Andersen, Edwina H. Weilbye, Rev. E. M. Stensrud, Irene S. Roemer, Karrie J. Thorbjornsen, Blanche A. Johnson.

San Francisco. It is due to this fact that the Synod meeting of the Norwegian Lutheran Church of America was also held in this city.

The bringing of this large Lutheran church gathering to San Francisco was due to the initiative of Trinity Church and its pastor. Rev. Stensrud laid his plans before the California Special Conference and later before the entire Pacific District meeting, and this body presented the matter to the great church convention, representing the entire Synod, held at Minneapolis in the summer of 1913, with the result that the decision was reached in favor of San Francisco.

The task of making arrangements for receiving this vast assemblage, for the hotel accommodations, for the necessary meeting places and railroad rates were successfully accomplished by the synodical committee on arrangements, of which our pastor was a member and a leading spirit.

There were present at the synodical sessions daily from May 31 to June 5, from 500 to 800 delegates and pastors and guests, representing churches of our Synod from all parts of the United States.

The Choral Union of the Norwegian Synod held its fourth tri-annual "Song Festival" on the evening of June 4 in the Civic Center Auditorium. There were 532 singers, accompanied by "Luther College Concert Band," consisting of 62 pieces. The attendance at the concert was in excess of 5,000 people.

The "Young People's Rally" was held on Saturday evening, June 5, and was attended by 621 persons, representing churches scattered from the Atlantic to the Pacific oceans and from Canada to the Gulf of Mexico. This meeting was one of the most enthusiastic of the entire week.

On Sunday morning, June 6, "Mission Services" were held at the Civic Center Auditorium. At this service more than 2,000 brethren were present. A collection of $270 was taken up.

In reviewing the work of Trinity Church this year, I note that the regular running expenses of the congregation were met. The Ladies' Society raised about $550. The Sunday-school and Young People's Society have also been doing well. The financial status of the congregation now looks cheering. On January 1, 1916, the first payment of $500 will be made on our Church Extension debt. The prospects are that, in the near future, the entire church debt, a year ago aggregating $11,500, will be liquidated.

At our last "Easter Communion" service there were 146 communicants, of which number 121 were young folks who had been confirmed in Trinity Church. This relatively large proportion of young folks is also found at our regular Sunday services, which this year shows the remarkable increase of nearly 35 per cent over that of last year. This is the result of years of faithful and consistent church work. And it demonstrates that English Lutheran church work is a live issue which should be seriously considered throughout the entire Lutheran Church in America. It is the only hope for retaining our young people within the fold of the church after they are confirmed.

TRINITY CHURCH CHOIR—1911 (Left to right)
John J. Olsen Jr., Mrs. J. J. Olsen Jr., Gustav Paulsen, Harald Paulsen, Mrs. A. Pettersen, Margrethe Sonderup, Hannah Selsvold, Anna Bammann, Ragna Thorndsen.
Mrs. Chas. Claussen, Alma Hansen, Marguerite Hansen, Mrs. E. M. Stensrud, Peter Paulsen, Mrs. George Krull, Lilly Johnson.
Ethel Johnson, Mabel Johnson, George Krull.

THE CHOIR AND CHURCH MUSIC

In this branch of church work Trinity has always been exceedingly blessed. The choir for the first year and a half was under the leadership of Mr. P. Paulsen. Since then it has been directed by Mrs. E. M. Stensrud, the pastor's wife.

But few Sundays, in all these years, have passed by without the rendition of a good anthem. And the anthems rendered have always been of high standard, comprising a careful selection of the works of the best composers.

The choir members have always been faithful and their work is all voluntary.

Much praise must be given Mrs. E. M. Stensrud for her tireless and efficient labor in this field. It is due mostly to her musical talent and accomplishment that our present high standard of church music has been reached and maintained.

I should like also to mention the names of Mr. Geo. Krull, Mr. P. J. Oksen, Mrs. P. Paulsen and Mrs. J. J. Olsen, Jr., who have, from time to time, substituted the choir anthem with solos.

At intervals in the history of the choir it has augmented itself for the occasion and rendered sacred cantatas or given song services, presenting some of the best oratorio works.

For church organist we have been fortunate in having the faithful services of Mrs. E. M. Stensrud. She was for several years assisted by Miss Clara Olsen, now Mrs. A. H. Pettersen.

PASTOR AND MRS. E. M. STENSRUD AND THEIR DAUGHTER, INGEBORG.

Biographical Sketches of Prominent Members Who Assisted in the Building and the Rebuilding of Trinity Church

[The writer can not refrain from presenting to his readers a few biographical sketches of those members who have been with Trinity Church from the beginning and became so prominently identified with it in its work of rehabilitation and struggles arising from the disaster befalling our city in 1906. However much the writer should desire to embrace sketches of all members and affiliates of Trinity, the realization of such desire would lie beyond the scope and purpose of this volume.]

JOHN JACOBSEN OLSEN, SR.

Mr. Olsen was born in Als, Denmark, October 31, 1855. At the age of seventeen he emigrated to the United State and found employment as farm-hand in Iowa. In 1875 he went to San Francisco and was variously employed until 1878 when he started a restaurant in Spear Street. In 1888 he moved his business to 216 Market Street. After the earthquake, April 18, 1906, he resumed business at the old location, later establishing two places, 244 and 446 Market Street, when his two sons, William and John, became his partners.

March 25, 1880, Mr. Olsen married Catherine Marie Christensen. Four children were born to them, three boys and one girl—William C., John J., Jr., deceased; John J., Jr., and Clara C. (Mrs. A. H. Pettersen). March 25, 1905, they celebrated their silver wedding anniversary at their spacious home, 708 Castro Street, the pastor of the church officiating. The numerous messages of congratulations, the beautiful presents and the many speeches emanating from the host of friends gathered around the festal table evidenced the high esteem in which Mr. and Mrs. Olsen are held in the community.

William Christensen Olsen, Mr. Olsen's eldest son, was born January 27, 1881. He was educated in the public schools of San Francisco. On April 16, 1906, he married Miss May Ellis. Two children have been born to them, William Christensen and Ruth Virginia. They reside at Burlingame, Cal.

John Jacobsen Olsen, Jr., was born January 30, 1884, and was educated in the public schools of this city and at the University of California, whence he graduated in the spring of 1907. On June 24, 1910, he was married to Miss Marie Emily Pauline Sonderup. Mr. Olsen was secretary of the church from 1909 until 1915, when he was elected assistant treasurer. The young couple reside in Capp Street, San Francisco.

Mr. Olsen's success as a business man is generally conceded in the commercial world. As a man of integrity, honesty and faultless attention to duty Mr. Olsen is known by all who have the good fortune to make his acquaintance.

"Whosoever findeth a wife findeth a good thing and obtaineth favor of the Lord." The truth of this good old word Mr. Olsen has experienced and is willing to verify. When you speak to Mr. Olsen about his success in life he unqualifyingly gives the credit to his good wife. And indeed Mrs. Olsen has been a wife endeavoring to fulfill the intent and purpose of the Lord when He said, "It is not good that the man should be alone, I will make a helpmeet for him." As a wife and a mother Mrs. Olsen has been a helpmeet in the true sense of the word. Referring to the part Mr. Olsen has taken in forwarding the cause of God's church at this place, no less credit is due Mrs. Olsen.

Mr. J. J. Olsen is a charter-member of Trinity English Evangelical Lutheran Church and ever since the organization he has been a member of the Board of Church Wardens. The importance of the so-called English Mission in the Lutheran Church in America was never better understood by anyone than Mr. Olsen. Experience had early taught him that our Lutheran people in this country would poorly succeed in keeping their children in the folds of the church, unless English Lutheran work was diligently prosecuted among them. Therefore, when the matter of starting an English Mission in San Francisco was taken up for discussion in Our Savior's Scandinavian Evangelical Lutheran Church, Mr. Olsen became one of the first and foremost spokesmen in the interest of the cause.

Hardly was ever an undertaking of significance entered upon and carried out successfully without a due share of accompanying dissappointments and hard work in the initial efforts. The establishment of an English Lutheran Church in San Francisco was no exception to this common experience. A weak beginning, lack of funds, only public halls for worship, the importance of the work but little understood, no experience of other English Lutheran Missions to go by or from which to draw inspiration—these were elements working together to make the undertaking exceedingly arduous. To succeed we needed men of courage, of faith, and willingness to sacrifice means, time and energy. Mr. Olsen was one of those men who always rose to the occasion and stepped into the breach, when it became necessary to make sacrifices. From the very start, with unswerving faithfulness and never-failing energy, he labored true to his purpose and determination to see firmly established in this community an English Lutheran church. And now Mr. Olsen may look back on these eighteen years and more and behold erected a spiritual home where the fathers' faith is proclaimed in the children's language—the realization of his hopes and prayers and labors.

FOUR PIONEER FAMILY GROUPS

There are four groups of families in the Scandinavian community of the bay cities, whose names are inseparably connected with the work of the church in this region. In order of arrival at the port of San Francisco, their names are as follows: The Nelson-Lucky group, the Jacob Olsen group, the Krull group and the Throndsen group. The heads of these families became identified with the work of our church in the early days of the Reverends Hvistendahl, Carlsen, Diedrichsen and Groensberg, and they are also numbered among the pioneers of our local Scandinavian community. Three of these families came from Norway and one from Denmark. Coming here, they at once looked for their own church, which in those days was only in its infancy out here. One of those names, that of Captain Nelson, is even found upon the charter-membership roll of Our Savior's Scandinavian Evangelical Lutheran Church—the first Scandinavian Lutheran congregation organized on the Pacific Coast. The good old Word says, "The Lord leadeth the hearts of men like rivers of water." How true we find this word in reflecting upon the history of our church in America. The Lord has indeed led our people's hearts like rivers of water. In the East and in the West, in the South and in the North, we behold the labors of our fathers and mothers like silvery threads entwined in the history of our American Lutheran Church. In our church community here, there are, indeed, many names deserving of recognition, but none of them more than the abovementioned. These names will ever remain brightly shining in the annals of our Lutheran church in the bay cities community.

The necessity of English Lutheran church-work was strongly perceptible even in those pioneer days, the period of transition being already in progress among our people. Something had to be done to preserve the rising generation for the church of our fathers. The churches of other persuasions round about them, using the language of the children, became very attractive as places for the children to attend Sunday-school. Many of our people reasoned thus: We can always take our children out of these Sunday-schools and send them back to our own church at the age of confirmation. The consequence of this practice was suicidal to the progress of our own church. The thinking fathers and mothers of our community became alarmed at the situation and with earnest solicitude they began to urge the use of the English language in the church. As early as 1880 the Scandinavian Lutheran Church secured an assistant pastor whose duty it should be especially to take care of the English branch of the work, and Rev. O. Groensberg was called. But the time was not yet ripe for the establishment of distinctively English Lutheran work among our people. The finances of the congregation did not seem to warrant it, and other preliminary work had to be done. However, the pastor of Our Savior's Church, Rev. Groensberg, did everything in his power to meet the demands of the times. The plan of having alternate services in the forenoon was adopted, and then again regular evening services in the English language were tried, Sunday-school classes were established, and confirmation instructions were always carried on in the English. But all this noble effort proved inadequate for keeping the young folks attached to the congregation. Something more was necessary. A distinctively English church had to be established. Steps in this direction were taken in 1897, when Our Savior's Church again decided to call an assistant pastor for the English branch of the church.

The afore-mentioned families who had been pioneers in the establishment of a Scandinavian Lutheran church in San Francisco again came to the front, when the question arose as to beginning English Lutheran work for the children and young folks. Never-failing interest, constant and indefatigable work, as well as financial sacrifices, are part of the contribution these families have given to the English cause. But they have given more. They gave the most precious gift that can be given—their children.

The Nelson-Lucky group has been mentioned before in these columns. Let me only add that "Lulu" Lucky (now Mrs. Bromley), though residing in another part of the State, counts herself a member of this church and annually contributes to its support; and further, that Nelson Lucky died July 2, 1915, leaving a widow and two children, Llewellyn and Evelyn. Mrs. Lucky's maiden-name was Hulda Gudmundsen. She is a daughter of Captain and Mrs. A. B. Gudmundsen, charter-members of the congregation.

The Jacob Olsen group. Mr. and Mrs. Olsen arrived in San Francisco in the fall of 1873. At once they joined the Scandinavian church. Five children were born to them—Henry Lövedahl, born March 21, 1874; Charles Mason, born June 30, 1876; Emily, born January 11, 1880, and Oscar George, born January 11, 1882. Emily's name has already been transferred to the annals of the church triumphant, whither her sainted parents had gone before.

OSCAR OLSEN

Henry was the first treasurer of Trinity Church. This position he held for thirteen years. Henry Olsen's work in the upbuilding of our church finances will ever be cherished in grateful memory. Tact, discretion and good judgment were exercised by him in a manner productive of lasting good to the congregation.

On June 6, 1909, Henry Olsen was married to May Karlson. One child is born to them, Henry Emil. Mr. Olsen is holding a position in the postal department, and several years ago he took up his residence in Oakland. On account of the long distance to the home church, a transfer of membership to St. Paul's Church of Oakland became necessary. Trinity sincerely regrets the loss of Mr. and Mrs. Olsen as members. A comfort, however, it is that they now belong to the fold of our sister congregation. Trinity's loss is St. Paul's gain.

Oscar and Charley Olsen, following the trade of artisans, reside in this city, and are counted in the number of mainstays of Trinity. From 1909 Oscar Olsen has served as a member of the board of trustees of the church.

The Krull group. All the children now living became members of Trinity Church. Lydia Nicoline Godfreddine, born August 29, 1881, is a charter-member of our church. June 27, 1900, she was married to Mr. Charles Martin Claussen. The Claussen branch of this group embraces five children, Erna Wilhelmine, Axel Krull, Ruth Louise, Zita Virginia and Carl Churchill. The whole Claussen family are hard workers in the cause of the church. Mr. Claussen, born June 18, 1870, Copenhagen, Denmark, deserves special mention for his work in the Sunday-school. It was in 1909 that a complete graded system was adopted by the Sunday-school. That year marks the beginning of encouraging activity in this branch of our church-work, an activity at once traceable by its blessed results. The writer voices the sentiment of the whole congregation when he makes the statement, that the high standard and efficiency of our Sunday-school is due much to the untiring efforts of Mr. Claussen. Being by nature a lover of children and a father of many children, he always knows what children want. And our Sunday-school has derived the benefit of his never-failing forethought and resourceful mind. From 1909 till 1913 Mr. Claussen was the assistant superintendent of the Sunday-school. In 1901 he was serving as secretary, and in 1912 he became a member of the board of trustees. The Claussen family, together with the widowed mother and grandmother, Mrs. Lydia Krull, reside at their own home in Castro Street of this city.

GEORGE KRULL

Aletta Louise, born July 14, 1883, was another active member of Trinity. June 20, 1905, she was married to Mr. Frederick Sophus Monrad Frank and moved across the bay. Three children are born to Mr. and Mrs. Frank, Aletta Evelyn, Harold Frederick Westenberg and Lillian Estella. The Franks transferred their membership to St. Paul's English Lutheran Church of Oakland, where they have taken their places among the most active workers. Together with the widowed mother, Mrs. Mathea Frank, they reside in Baker Street, Berkeley.

George Nicolai Krull, born June 20, 1885, was a third contribution of the Krull group to the cause of Trinity Church. May 18, 1910, Mr. Krull was married to Lise Emilie Brorby. "Here we have a chip of the old block." How true this saying in the case of this young couple, both of whom were consecrated to the work of the church by the prayer of pious parents. The result of these prayers and of an early Christian training may plainly be seen by the work of Mr. and Mrs. Krull in God's vineyard. Much credit is due Mr. Krull as a member of the choir and as teacher and assistant superintendent of the Sunday-school. Faithfulness, sincerity in the work and never-failing regularity, and faultless attention to duty are some of the elements in the make-up of this young man's personality. It is needless to say, that the fellow-members of Trinity fully appreciate his self-sacrificing work for the good of the church. Mr. Krull's talent as a singer, too, is gaining him a name beyond the limits of the church circles in our community. He is enjoying a lucrative position as a departmental head in the Coffin-Reddington Wholesale Drug Company. Mrs. Krull's experience as a teacher in the public schools has proven a very valuable factor in the work of the Sunday-school, particularly in the primary department where special gifts are required in producing the best results. Mr. and Mrs. Krull reside in Folsom Street of this city.

FREDERICK FRANK

Axel Peter Gotlieb, born July 23, 1872, was the eldest son of Mr. and Mrs. Krull, Sr. He grew up to be a young man of finest grain. As a worker in the church he followed in the steps of his sainted father, Ernst Krull. But his day of labor was to be of short duration. In 1898 he was translated to the church above, whither his father had gone only a couple of years before him.

The writer can not refrain from referring to the high esteem in which Ernst Krull was held in our church community. By all he was considered a father in Israel. On the occasion of his death, his co-workers in the vineyard showed the regard in which they held him, so fittingly expressed in the following resolution:

"*In Memoriam*

"At a congregational meeting of Our Savior's Scandinavian Evangelical Lutheran Church, in San Francisco, on the second day of September, 1895, the following preamble and resolution were unanimously passed:

"*Whereas,* It has pleased our Heavenly Father, in His infinite wisdom, to call from our midst to his heavenly home, our beloved brother and co-worker in Christ Jesus,

Ernst G. Krull

taking him while apparently in good health and in his prime of usefulness for our congregation; be it therefore

"*Resolved,* That we, in humble resignation, accept God's ways as perfect, and thank Him for all the aid, comfort and guidance He bestowed upon us through our deceased brother; that we extend to the bereaved family our purest sympathy, feeling assured that the Lord will be the widow's comforter and the orphans' father, and that the life of the deceased will always be kept in dear remembrance as worthy of emulation; that when our journey through life is ended, we, by the grace of God, will be permitted to join in a happy reunion in Heaven."

The Throndsen group. Since the year 1900 all the members of this family have belonged to Trinity Church. Upon their return from Oakland, where they had been members of St. Paul's English Lutheran Church, they affiliated themselves with the English branch of our church-work in San Francisco.

Albert Throndsen, born March 11, 1864, Hardanger, Norway, emigrated to America in 1884, his destination being San Francisco. At once he joined the Scandinavian church. July 8, 1894, he was married to Aagot Skorgen, Rev. O. Groensberg officiating. Both of them became ardent workers in the Scandinavian church, and ever since then the work of the church has been uppermost in the minds of Mr. and Mrs. Throndsen. Eight children have been born to them, Martha Selma, Ragna Agnes, Thoralf Olaf, Esther Constance, Alma Marie, Eleanor Theresa, Albert Harold and Edward Julian.

"Train up the child in the way he should go, and when he is old, he will not depart from it." This precept has been the guiding principle in the Throndsen home in raising their many children. Their work in the church has proven that they thoroughly understand the truth contained in these words. It is fifteen years now since the Throndsens joined Trinity Church, and all these years the Throndsen family, father, mother, children and all, without exception, have clung to the church. Unswerving faithfulness to duty characterizes this family in their work in the vineyard. The Throndsen name is inseparably connected with all the doings of the church in all its branches, be it the Sunday-school, the choir or the Young People's Society. By their actions they prove their faith in the truth that spiritual life can be sustained only by diligent use of the means of grace. Therefore absence from the church at the time of public service happens to a member of the Throndsen family only in the case of necessity.

The oldest child, Martha, born June 22, 1892 was married to William A. McKay, May 24, 1914, and now resides in Alameda. Martha at once secured a transfer of membership to St. Paul's Church, where the young couple are now actively engaged in the work of that congregation. The rest of the Throndsen children are still attached to the parental home and church. From 1904 until the present day, Mr. Throndsen has served as a member of the board of wardens, and for many years as assistant treasurer of the congregation.

By trade Mr. Throndsen is a skilled mechanic and this profession he followed for more than nineteen years. These last few years he has been profitably engaged in the circulating department of one of our large metropolitan dailies.

"A Christian mother's prayer is almighty" is a good old saying. Prayer has been the never-failing means of many a Christian mother while engaged in the important work of shaping the destiny of the young boy or girl entrusted to her care. The Christian mothers of the afore-mentioned groups were given grace to make this experience. In prayer they have raised their children and God's blessings have rested upon their work and their homes. Mrs. Nelson and Mrs. Olsen have been given grace to stand face to face with Him to whose throne they so often resorted during their sojourn on earth. May the Lord grant every congregation many Christian mothers!

FREDERICK C. H. MILLER

Mr. Miller was born in Als, Denmark, March 4, 1855. Son of Hans H. and Anna C. Miller. Educated in the state schools of his native land. In the days of his youth became a German subject as a result of the war of 1864, when Schleswig was ceded to Germany. Was too patriotic to accede to foreign aggression. Would leave home and everything dear to him there rather than to bend under the yoke of a foreign prince. In 1872 he emigrated to America, arriving in Memphis, Tennessee, in the Fall of the same year. Ever since a mere lad Miller gave evidence of possessing mechanical genius. As a little boy he was ever busy making things. This native ability became the determining force in shaping the man and his life-work. Arriving at Memphis he at once sought work in the mechanical line, securing a job as a carpenter. Here it may be added, that he has never been without a job since then. It is interesting to hear Mr. Miller's friends speak of him as one who never takes "No." In the spring of 1874 he came to San Francisco. At once he struck out to find work, taking his kit along. "Do you need another good man?" quoth the hopeful young man from the East. "No! Anyhow I am too busy today. Come back tomorrow," answered the burly boss. "Tomorrow I may be working for somebody else," rejoined the soliciting applicant. The chief, giving the insistent young man a searching look, said, "Can you go on the job now?" "Now," was the answer. The young man had found a job. He did not, however, long keep his place at the bench as a common mechanic; soon he was given the position as foreman, constantly gaining a reputation for his ability in handling men and getting much work done in the least possible space of time. Naturally a man of that caliber will not be found very long working for others. Soon Mr. Miller established a business of his own, and now he is rated as one of the most competent and successful building contractors in this great metropolis. And starting with two empty hands he is looked upon as a man of considerable means.

Mr. Miller is a charter-member of Trinity Church. He was awarded the contract, when in 1905 the congregation decided to erect a church edifice. Mr. Miller is not a man looking either for praise or thanks, yet I know that I voice the sentiment of every member of Trinity Church when I say that Mr. Miller is, in a special sense, one of the noble men who, by the providence of God, became the means of rescuing Trinity Church from impending ruin arising from the calamity of 1906. Trinity Church was under construction in those fateful days and, at that, well-nigh completed, when the disaster came and partially destroyed the structure. Besides the damage done to the building other discouraging features followed as a consequence of the general destruction. Half of the subscriptions to the building fund were outstanding, the congregation was scattered and its members financially crippled. Every man had more than enough to do with the rehabilitation of his own home or business. The outlook for Trinity was very dark. Then Mr. Miller arose to the occasion. Though himself financially embarrassed, his property and business being completely destroyed, he took hold of the reconstruction of Trinity Church and carried it to completion. The congregation was unable to meet its obligations for many years, but Mr. Miller patiently waited, giving the church all possible opportunity to carry on its work unhampered and to pay its bills when ready and able. Trinity can not pay its debt of gratitude to Mr. Miller, but we are confident that he feels rewarded in view of the fact, that his had been the privilege to do what he has done for the advancement of God's Kingdom.

November 2, 1888, Mr. Miller was married to Serine (née Petersen), Rev. L. Carlsen officiating. Seven children were born to them: Freda I., Florence H., Herbert H., Alice A., Annie C., Henry H. and Charles E., the last three deceased. The Miller family reside at their comfortable home in Dolores Street, near Fifteenth, enjoying the love and respect of all who have had the good fortune to know them these many years.

AXEL SONDERUP

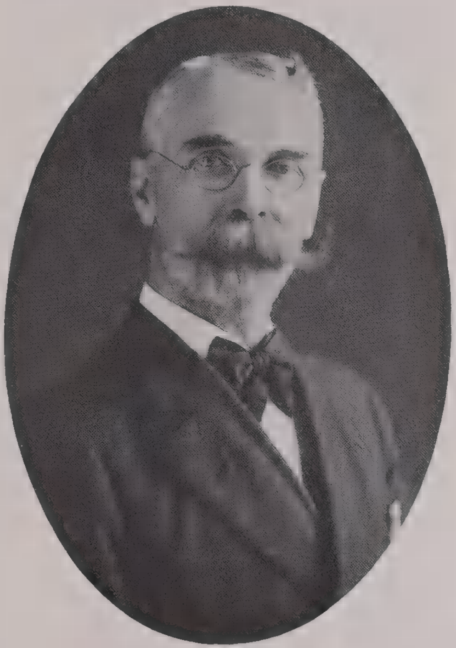
Mr. Sonderup was born at Malmoe, Denmark, June 15, 1847. His father's name was Andreas Fedder Sonderup and his mother's name Emilie Wraae. He was educated in the church and schools of Waerslev, Denmark. Possessing gifts that would fit him for the business world, the course of his education was directed along commercial lines. Mr. Sonderup was engaged in business in the home country until he emigrated to America, June 14, 1880. Shortly after his arrival in California he secured a position as clerk in a store, and during his first years in this country he tried his hand at various trades, but never feeling satisfied before he was back in the work for which he had fitted himself in his youth. He secured employment as the head bookkeeper of the well-known firm of Brown & Johnson, wholesale dairy, hay and grain. This position of great trust and responsibility he has now held for more than twenty-six years.

May 3, 1878, Mr. Sonderup was married to Anna Margrethe Sonderup, Rev. Engberg officiating. Five children were born to them, Margrethe, Marie Pauline (now Mrs. J. J. Olsen, Jr.), Edward Wilhelm, Emilie Pauline and Andreas Wilhelm, the last two deceased. Sunday, May 3, 1903, Mr. and Mrs. Sonderup celebrated their silver wedding anniversary. This occasion will be remembered as one of the pleasantest functions that ever took place in our church community. The many admiring friends of this popular couple would not permit such an opportunity to pass by without giving expression of their good-will and kindly feelings cherished for Mr. and Mrs. Sonderup. It was no little surprise to the jubilants when, at the regular church services of that memorable Sunday, a quartette instead of the choir, sang in the Danish language, one of Grundtvig's well-known songs, "Det er saa yndigt at fölges ad." This departure was made in honor of Mr. and Mrs. Sonderup and intended as a little token of recognition for faithful work in the cause of Trinity Church. Mr. and Mrs. Paulsen, Mr. B. L. Hoff and Marie Sonderup, their daughter, with Mrs. Stensrud at the organ, constituted the quartette. In the afternoon, the Sonderup home in Duboce Avenue became the center of the wedding celebration. A large number of guests had been invited. Never was the famous hospitality of the Sonderup home better demonstrated than on that occasion. The pastor of Trinity Church delivered the address and extended the congratulations on behalf of the church community. The festivity was increased by many other expressions of good-will in the form of precious gifts, songs and messages of cheer.

The name of the Sonderup family is inseparably connected with the history of Trinity Church. They are among its oldest members, and they have been of the foremost workers well-nigh since its organization. Though Danes at heart, loving and cherishing everything Danish, be it in literature, art, language, music or customs emanating from their native land, yet they are first, last and all the time Americans. When their children grew up and commenced to go to school, they soon learned to understand the difficulty arising from the language question in the American Lutheran Church. They realized that all foreign-speaking churches in this country must sooner or later adopt English as the medium of speech and instruction. They had witnessed how the Lutheran young folks were rapidly leaving the church of their fathers, because they did not understand the language spoken there. Therefore they eagerly embraced the opportunity of aiding in the establishment of an

English Lutheran church in San Francisco. And with loving solicitude they have labored these many years in the furtherance of the English Lutheran cause. A characterization of the Sonderup family as church workers may fittingly be expressed by the word "faithfulness." The truth that the criterion of church work is church attendance and diligent use of the means of grace, is thoroughly understood by the Sonderup family. It must be a case of necessity, when the Sonderups are absent from church or off duty in any church activity. May the Lord give them grace ever to remain faithful!

From 1902 to the present day Mr. Sonderup has been a member of the board of wardens; from 1903-11 he acted in the capacity of secretary, and in 1911 he became treasurer of the congregation, which position he still holds. The Sonderup family reside at their own home in Capp Street, San Francisco.



PETER MARTIN PAULSEN

Mr. Paulsen was born at Hjoerring, Denmark, April 1, 1858. His father's name was Gustav Nicolaus Theodor Paulsen of Holstein. His mother was Karen Ansine, née Raebild, of Egeberg. After having gone through the regular public schools he entered a private college at Hjoerring, where he received a good education, particularly fitting himself for business. For seventeen years Mr. Paulsen was engaged in commercial pursuits in his native country. In 1889 he emigrated to America, the same year arriving in San Francisco. Here he found profitable employment in mechanical lines of labor, which trade he has followed to the present day.

On April 12, 1890, he was married to Miss Bartholine Elisabeth Cathrine Hoffmeyer. Their union in wedlock has been blessed with four boys, Swen Hoffmeyer, Harald Hoffmeyer, Gustav Hoffmeyer and Volmer Hoffmeyer, Swen and Volmer, deceased. The Paulsen family are of the oldest members of Trinity English Evangelical Lutheran Church. They belong to the number in our Scandinavian community who truly understand the importance of English Lutheran church work, and being of the first members of Trinity they have also had an opportunity to shoulder the responsibility in the upbuilding of this congregation.

The Paulsens may be said to be a singing family. Every member of it sings or plays. It is evident that good musical talent in the work of the church is invaluable. The labor of the Paulsen family in the church choir is worthy of special mention, and not the least emphasis must be placed on the name of Peter Paulsen, who was the first director of the choir, and since that early period of the congregation has been one of the indefatigable workers in behalf of good church music in Trinity. However, faithfulness in all matters pertaining to the performance of church duties is characteristic of the whole Paulsen family. From 1902-8 Mr. Paulsen served as a member on the board of trustees of the church.

On April 12, 1915, Mr. and Mrs. Paulsen celebrated their twenty-fifth wedding anniversary. Their pastor and his wife and many friends were present. A few of those who had witnessed the happy occasion twenty-five years before were also among the guests. Greetings and felicitations from far and near found their way to the Paulsen home that day. Of these may be mentioned special greetings from the pastor, Rev. O. Groensberg, who officiated at the wedding, and who embodied in his message the text from which he had preached the wedding sermon. Their present pastor took this text as the starting point for his address in honor of the jubilants. The glad evening was punctuated by happy addresses and appropriate singing, all giving expression to the respect accorded the Paulsen family by this community, where they have lived and labored long and faithfully.

In our democratic day not much attention is paid to nobility based on "blue blood." An honest worker in any honorable walk of life is the real "blue blood" of our American democratic society. Yet it is interesting to know something about the blood flowing in our veins, and highly interesting, yea, and gratifying, if we can say that our parents and grandparents, and great-grandparents, have been men and women filling high positions of trust in Church and State and in the world of industry, art and finance. In this connection, therefore, I can not refrain from mentioning the very interesting fact that Mr. Paulsen's wife comes from that class of forbears. Therefore, I take the pleasure in appending, in part, here geneaology—and parenthetically be it said that this geneaology shows, too, that the celebrated sugar-king, Claus Spreckels, is a branch of Mrs. Paulsen's family tree, obtaining the name Spreckels by dropping the "sen."

In 1450 Hartwig von Spreckelsen emigrated from Bremen to Hamburg. In this city his son, Heine von Spreckelsen, became senator, and his grandson, Johannes von Spreckelsen, mayor. In 1505 Johannes von Spreckelsen founded the annual family gatherings of all relatives of the von Spreckelsens—these meetings are described in detail in Dr. von Bencke's book on Hamburg. This family is mentioned as one of the most prominent, taking a very active part in all affairs of the old "Hansestad," and being known for refinement, generosity and wealth. Coins made in honor of members of them are in existence.

Johann von Spreckelsen, senator in Hamburg, was made a nobleman by the Emperor Leopold in the year 1676. His grandson, Nicolaus von Spreckelsen, died in Hanover in 1722, and is the progenitor of the von Spreckelsens in Denmark.

Nicolaus von Spreckelsen, who died in 1767, established a sugar refinery in Hamburg. His son, Barthold von Spreckelsen, established a sugar refinery in Aalborg. He died in 1805.—The Claus Spreckels branch.

Barthold von Spreckelsen, born in Aalborg in 1789, attorney at law, died in 1844. Married to Mette Kirstine Hopp. Twelve children were born to them. The tenth was Hulda von Spreckelsen, born in 1828, married in 1856 to Cordulus Henrik Emil Hoffmeyer. They had five children. The third, Bartholine Elisabeth Cathrine, was born at Skagen, September 27, 1862, where her father was mayor for three years.

The Paulsens reside in 22d Street, San Francisco.

HANS. J. SCHROEDER

Mr. Schroeder was born at Varde, Denmark, August 10, 1850. His parents' names were Henry Schroeder and Anna (née Sorensen). He received his early training in the church and schools of the native country. In the spring of 1872 he emigrated to America, arriving at New York on June 4th, with Davenport, Iowa, as the objective point of the journey. After a three years' residence there, he came to San Francisco on March 13, 1875. During the first four years in California he was employed at times in the city and then again in the country. Finally he secured employment at the Spreckels Sugar Refinery of San Francisco. This position he has held for thirty-six years. Mr. Schroeder is a man of excellent parts, a man whose actions speak more than his words, a man once known always known. The governing principle of his life is scrupulous honesty and fidelity to duty.

HANS J. SCHROEDER

May 27, 1881, Mr. Schroeder was married to Meta Cathrine Hoeck, Rev. Julius Fuendeling officiating. Three children were born to them, Henry N., Chester Hans, and Lillian Anna. Mr. Schroeder and his family are charter-members of Trinity English Lutheran Church. During the early years of Trinity its supporters were few, and the outlook was not very bright, either for members or pastor. But He, who is the Head of the church and the Builder of that "temple not builded by hands, eternal in the Heavens," raised up a few mothers and fathers, imbued with the resolute purpose of starting an English Lutheran church in San Francisco—yea, and starting in a way that would insure future success. Among these few willing and self-sacrificing fathers and mothers were Mr. and Mrs. Schroeder. The pastor of Trinity Church and his family shall never forget the helpfulness and encouragement received at the hands of the Schroeders in those early and trying days.

H. N. SCHROEDER

All the Schroeder children have been confirmed in Trinity Church. Lillian is now Mrs. G. C. Nunan, residing in Oakland. Many years ago Chester left the parental home to seek his fortune in other parts of the world. Henry is residing in San Francisco. Mr. Schroeder always desired to have his children get a good education; nor did he spare means that this might be done. Besides sending them through the regular schools at home, he sent one of them, Henry, to Luther College, Decorah, Iowa, keeping him there for three years. Henry has also proven his appreciation of the no-small sacrifices on the part of his father and mother in sending him to that far-off Eastern college. After his home-coming young Henry entered business. How well he has succeeded the history of his career will bear out. In the course of these brief years he started and rapidly built up commercial enterprises, reaching a point of success that gives evidence of the keenest business genius.

September 23, 1905, Henry Schroeder was married to Katherine Rasmussen Smith. The young couple reside at their own comfortable home in Fair Oaks Street, San Francisco, and are of the faithful workers and mainstays of Trinity Church. In 1908 Henry Schroeder was elected to serve on the board of trustees of the congregation.

Mr. Hans Schroeder was a member of the board of wardens of Trinity Church from 1899 to 1902, and was for many years a member of the board of trustees. Mr. and Mrs. Hans J. Schroeder reside in Tennessee Street, San Francisco.

CAPTAIN JOHAN SEVERIN HELLINGSEN

Captain Hellingsen was born May 1, 1858, in Korshavn, Norway. Having finished the regular state schools of his home town, the young man, Hellingsen, took up a course in navigation. Captain Hellingsen's ambition from boyhood days was to enter the sea-faring life—a trait undoubtedly inherited from his sturdy ancestral race. When fully equipped, educationally and otherwise, he went to sea, and from that time to the present day he has followed this vocation. In 1885 he decided to emigrate to America. His intention was not to quit the sea, but henceforth to make America his home country. At the time of his arrival here, a great change was taking place in the shipbuilding and sea-faring world. Sailing vessels were rapidly being replaced by or turned into steamers. From now hence, the student of navigation had to add another study to his course, that of steam. Having complied with all the requirements of modern navigation, Captain Hellingsen again followed his vocation, and for six years he sailed on the Great Lakes, making his residence in Chicago. Then he chose San Francisco as his home-base, and since then he has been in the coastwise trade, obtaining employment in the largest concerns of this city, notably the Charles Nelson and Hind-Rolph companies.

CAPTAIN JOHAN SEVERIN HELLINGSEN

Captain Hellingsen is in every respect a man of excellent parts. In his profession he is a decided success. From the lowest rung of the ladder he soon climbed to the top, becoming master of the vessel, and now enjoys the reputation of being one of the most efficient captains on the Coast. As a man, he is strictly sober and temperate, and endowed with a deep religious sentiment. At all times and everywhere, a man like Captain Hellingsen is an influence for good. True of him are the well-known words, "Though his mortal coil may perish, the influence of a good man lives on forever." These words were quoted to the writer by James Rolph, Jr., mayor of San Francisco, and were intended to express the high regard for the Captain in the company he has served for seventeen years, and of which Mayor Rolph is president.

October 1, 1892, Captain Hellingsen was married to Hilda Elvina Hansen, a young woman of true Christian refinement. Religiously the Captain is paralleled by his wife. The only source of true happiness is a blending of the human will and the Divine will. A home deriving its happiness from this source is a happy home. This may be said of the Hellingsen home, in which a sincere effort is made to blend the human and Divine wills. Captain and Mrs. Hellingsen have four children, Lillian Hedeverdina, Johan Severin Jr., Charlotte Elvina and Mrs. James Rutishauser, the last a child of the Captain's first marriage.

The Hellingsen name appears on the charter-membership roll of Trinity. The work done by the Hellingsens in the upbuilding of our congregation, coupled with substantial financial support, shall ever be cherished in grateful memory.

The Hellingsens reside at their exceptionally beautiful home in Church Street of this city.

JOHN PETER CHRISTENSEN

Mr. Christensen was born September 28, 1864, in Aeroe, Denmark. He was educated in the home country. As a young lad he proved to be especially gifted in matters pertaining to business. In school, therefore, particular stress was laid on such branches as would fit him for commercial pursuits. For many years he was employed in mercantile establishments in the home land. In 1888 he emigrated to America and came to San Francisco. Here he obtained employment with the local city railroad company, in the service of which he remained for more than seventeen years. Railroading was, however, an occupation foreign to the early training and tastes of Mr. Christensen. But steady work and good pay are not only to be coveted but also a necessity for one to whom is given the responsibility of providing for a family. The great calamity in 1906 befalling our city wrought changes in many a home and family here. Some lost the positions they had held for years, but instead new avenues for gaining a livelihood were opened. This became the experience of Mr. Christensen. In a limited time after the disaster to our city he returned to his old love, the mercantile life, which he has followed these nine last years of his life. Mr. Christensen has been very successful in all his work and undertakings and has acquired a comfortable share of material well-being.

October 8, 1891, Mr. Christensen married Johanne Marie Wilhelmine Sorensen, Rev. J. Christian Moehl of this city officiating. The following children were born to them, Anna Cecilia (now Mrs. R. G. Fontana), Chester Simon (deceased), Chester William and Harry Simon. The Christensen family are affiliates of Trinity Church. All the children have attended the Sunday-school and the two oldest took instructions for confirmation. The Christensen home is located in Vicksburg Street, San Francisco.

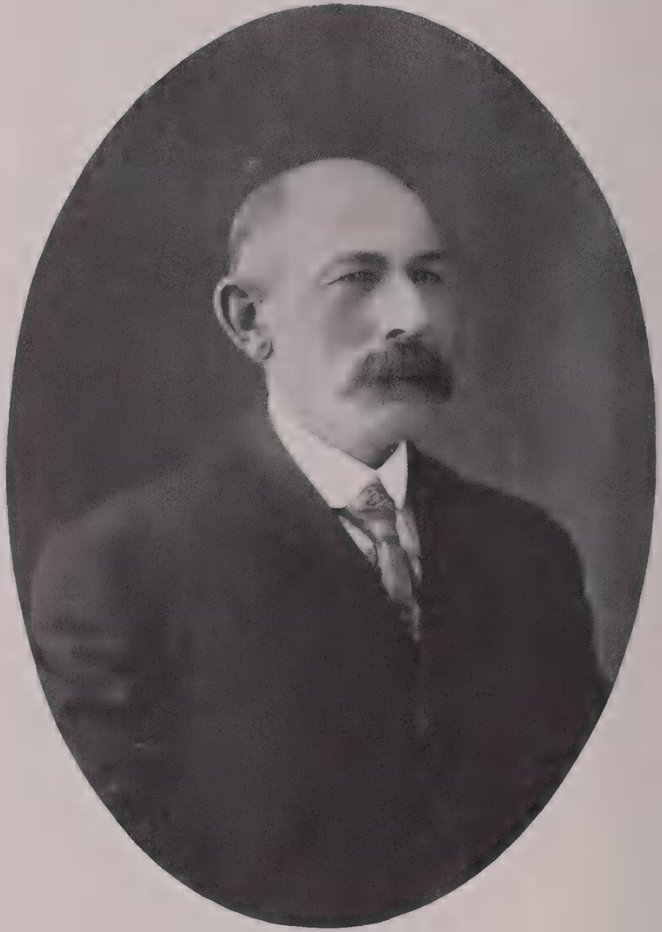
PETER OFTEDAHL

Mr. Oftedahl was born July 16, 1874, in Chicago, Illinois. His parents' names were Lars D. and Malena T. Oftedahl. Mr. Oftedahl received a good education, graduating from the public schools in Chicago. His ambition was to become a mechanical dentist, and as a young lad he entered the Columbia College of Dentistry, Chicago. At that period the science of making tools for the dental laboratory was in its infancy. Possessing unusual qualifications along mechanical lines, Mr. Oftedahl threw himself with all his soul into this work and ere the lapse of many years his name became prominent in the sphere of dental mechanics. And from dental mechanics he entered into the province of general mechanics, and now he is a man of much prominence in his profession.

April 7, 1897, Mr. Oftedahl was married to Elfrida Marie Ingeborg Hansen, Dr. J. N. Kildahl officiating. Their union in wedlock is blessed with two children, Edith Helen and Lucille Evelyn. Mr. Oftedahl received his religious training at Our Savior's Evangelical Lutheran Church of Chicago and he was confirmed by the Rt. Rev. O. Juul. Coming to San Francisco, Mr. Oftedahl and his family naturally affiliated themselves with one of the churches connected with the Norwegian Synod. The Oftedahls live in Carl Street, San Francisco.

HANS MARCK SMITH

Mr. Smith was born at Ballum, Schleswig, under Danish flag, July 11, 1854. His parents were Johannes Sorensen Smith and Hannah Christine. His father was a sea-captain, but also a successful farmer. Hans Smith was educated in the state schools of his native town. Was confirmed by Rev. D. Dau, and remained at the home place until he was 18 years old. He comes from a family of six children, three boys and three girls. Glorious reports concerning California, the country famous for its gold and sunshine and flowers, had come to the home of the young and ambitious man in the days, when he was making up his mind whether to carve out his fortune in life in the home land or to seek it abroad. The reports from California aided him in making a decision, and in the year 1873 he emigrated to America, arriving at San Francisco. He tried his hand at many things. He went to the country, working on the farm. Later he bought a large tract of land and started a farm of his own, raising hay and grain. At that time he met the man who became inseparably connected with him in business and friendship until the latter was taken away from him by death. His name was Mr. Wilson Wind. For six years Smith and Wind were farming together on a large scale. Then they sold out and established a restaurant business under the name of The Fountain Coffee House. Subsequently they started several restaurants at various populous city centers, and success followed every venture. In a few years they had accumulated enough capital to start a wholesale and retail business in teas, coffees and spices. Also in this venture they were very successful. The motto of the Wind and Smith firm was, "A square deal," and because they were true to this principle, they were singularly successful. For people knew, when dealing with Wind and Smith, that they were dealing with men of honesty and integrity, men who had made a success in life not by following the principle of frenzied finance, but by honesty accompanied by dint of hard labor. After the death of Mr. Wind, Smith's eldest son, John, was taken into the business as partner.



HANS MARCK SMITH

At first Mr. Smith resided in Alameda. Then he bought a site for a home in York Street and built a comfortable home, now situated in the heart of a district known in the Danish community of San Francisco as "Little Denmark." On January 9, 1886, Mr. Smith was married to Osine Jensen, a native of Germany. Three children have been born to them, John, Harry and Olga. Mr. Smith is a charter-member of Trinity English Evangelical Lutheran Church. All the children have been confirmed in Trinity.

Having resided and labored in the Golden State for thirty-seven years, Mr. Smith decided to visit friends and relatives in the land of his fathers. In the spring of 1911, together with his wife and little daughter Olga, he entered upon the journey. After many years of industrious application to duty he felt that he was entitled to some recreation. His successful career in business, too, warranted the taking of such a trip without feeling the financial sacrifices involved. Spending many months at home, the greater part of half a year, the Smith family returned, hale, well and hearty, feeling the benefits of the needed rest.

January 9, 1911, Mr. and Mrs. Smith celebrated their twenty-fifth wedding anniversary. Their spacious home in York Street was filled with guests bringing greetings and good cheer for the occasion. Many of the fifty guests seated around the festal table had been present at the wedding of Mr. and Mrs. Smith twenty-five years before. Expensive presents were brought by the friends and presented to the happy couple. The many speeches and messages gave evidence of the high esteem Mr. and Mrs. Smith have won for themselves during these many years.

A gloom was cast upon the happy home life of Mr. and Mrs. Smith a few years ago, when Mr. Smith was taken seriously ill and had to undergo an operation of a very serious nature, but his time of departure had not come—some part of his life-work was still undone. May He, in whom we live and move and have our being, keep His protecting hand over Mr. Smith, giving him continued grace to live among us many years yet to come. Mr. Smith has a kindly disposition, and is ever ready to do and dare for a friend in distress or need, and never do you find him reluctant to give a helping hand to any worthy cause.

ANDREW CHRISTENSEN

Mr. Christensen was born November 30, 1861, Als, Denmark. He was educated in the state schools at home. At the age of nineteen he emigrated to America. After a year's time in the Middle States he decided to go to California. For many years he tried his hand at various business ventures, and as a rule his efforts were crowned with success. Having spent many years of hard work and constant application to duty, Mr. Christensen felt that he deserved some rest from work and worry, so he decided to make a trip to his native land together with his wife and children. Upon his return to San Francisco he entered into the hotel business, establishing a firm under the name of Hotel Potter, located at the corner of Mission and Ninth streets. This proved to be the last venture in Mr. Christensen's earthly career. On January 24, 1916, after a brief illness, he departed this life, leaving a widow and two children.

May 21, 1898, Mr. Christensen was married to Caroline Bothilde Lassen. Their union in wedlock was blessed with two children, Alice Anna and Mabel Bothilda. The Christensens joined Trinity Church during one of the early years of its history. The unexpected message of Mr. Chirstensen's death, coming at the time when this volume is ready to go to press, moves the members of Trinity Church with a sincere feeling of deep sorrow. Although called to his last rest so early in life, Mr. Christensen has left his impress upon the minds and hearts of all who knew him.

The Christensen home is situated in Hartford Street, San Francisco.

CAPTAIN OLAUS BELLESEN

Captain Bellesen was born at Stavanger, Norway, March 27, 1866. His father's name was Bellest Andersen and his mother's name was Inger. He was educated in the home country. Living near the sea, the sea-faring life bespoke the young man's fancy from his earliest years, and for that profession he fitted himself. In 1887 he emigrated to America and came to San Francisco. He secured employment as a common sailor, but soon became second mate, not long after that securing his papers as first mate, and finally he reached the highest position of the vessel—that of captain. At the present time he is in the employ of the Chas. R. McCormick & Co., wholesale lumber and shipping. In the shipping circles of San Francisco he is rated as a very competent and reliable man.

CAPTAIN OLAUS BELLESEN

February 26, 1897, Captain Bellesen was married to Miss Gina Maria Osborne. The wedding took place at Our Savior's Scandinavian Evangelical Lutheran Church, Rev. E. M. Stensrud officiating. Four children have been born to Captain and Mrs. Bellesen, Roy Carl. Bellest Oliver, Bessie Gertrude, and Thomas Irwin. They are members of Trinity Church, and are comfortably situated at their own home in Twenty-fifth Street, San Francisco.

NIELS BENNETSEN TOFT

Mr. Toft was born May 29, 1859, Schleswig, then a part of Denmark. He received a good education in the home country, graduating from the regular public schools. America was the land of promise to the young man Toft, as well as to many more of his countrymen. And nothing could satisfy him short of becoming a citizen of the United States. This desire, however, was accentuated when Schleswig was ceded to Germany. In 1882 he emigrated and having spent a couple of years on the Atlantic Coast he came to San Francisco. Here he was variously employed until eighteen years ago, when he started a restaurant in the wholesale district of this city. This line of business he has followed all these years. Mr. Toft is rated as one of the most successful restaurateurs in San Francisco and is looked upon as a man of considerable means as well as a man of excellent parts.

His parents' names were Joergen Peter and Anna Maria Toft. January 2, 1889, he was married to Sophia Dorothea Diederichsen, Rev. O. Groensberg of Our Savior's Scandinavian Evangelical Lutheran Church officiating. The following children have been born to them, Frieda Marie, Nelson Valentine, George Washington, Mildred Anita, Sophie Dorothea, Helen Anna and Ervin Peter, the last deceased.

The name of the Toft family appears on the charter-membership roll of Trinity Church, where most of the children were christened and all attended Sunday-school and received instructions for confirmation. The Tofts belong to a large circle of families which is designated as the Toft-Diederichsen group, most of whom are affiliates of Trinity Church. The Niels Toft family resides in York Street at their spacious and handsome home located in the midst of a community known as "The Little Denmark."

AXEL HAGBARTH PETTERSEN

Mr. Pettersen was born at Christiania, Norway, June 9, 1880. The son bears the name of the father. His mother's name is Matilda Elizabeth. When a boy four years old he accompanied his parents to America, San Francisco being the point of destination. He was educated in the schools of this city. His religious training he received at Our Savior's Scandinavian Evangelical Lutheran Church, where he was confirmed by Rev. O. Groensberg. Mr. Pettersen is richly endowed mentally. As a boy his inclination was to become a business man, and ever since he left school he has been engaged in mercantile work. Eight years he was working for wages, but for the last ten years he has been running a business of his own. Mr Pettersen's business career is one of pronounced success. In 1906 he started a little haberdashery in Mission Street, near Twenty-first. Three months later occurred the destruction of the city of San Francisco. Mr. Pettersen's business came nearly being on the wrong side of the fire-line, but it was spared. The fire passed by. And since then Mr. Pettersen has been doing business where he first started. From a little wooden shanty, containing a couple of counters and a few shelves and a small stock, embracing only the necessities of men's apparel, his establishment has grown to include a commodious brick structure filled with every variety of men's clothing and wear, coupled with a volume of business exceeding all expectations, giving Mr. Pettersen a place in the mercantile world as one of its singularly successful young men.

On July 30, 1907, Axel Pettersen was married to Clara C. Olsen (daughter of Mr. and Mrs. Olsen, Sr.), pastor of Trinity Church officiating. This was the first wedding in the new church edifice, dedicated two days before by Dr. O. E. Brandt. This young couple has been with the congregation since its beginning, and therefore had a rich opportunity to share its sorrows and joys during the upbuilding. The bride started as a little girl in the Sunday-school, and the groom's name appears on the list of members following immediately after the organization. One child was born to Mr. and Mrs. Pettersen, Doris Catherine. They reside at their own home in Guerrero Street.

KNUD NISSEN KOLDINGER

Mr. Koldinger was born March 12, 1864, in Denmark. His parents were Knud Nissen and Dorothea Koldinger. Mr. Koldinger was educated in the public schools of his home land. He is a great admirer of his native country. Nothing is dearer to him than the Danish language, the Danish literature, Danish art and Danish ware, in brief, everything Danish he loves. Therefore, as might well be expected, it was not possible for him to become reconciled to foreign aggression. The sad events of 1864, handed down from father to son, had left indelible marks on young Koldinger's mind and early in his youth he decided to leave his fatherland rather than to bow to a foreign prince. In 1885 he emigrated to America and here he found employment in various capacities in the city and country. The last two years of his residence in San Francisco he has been in charge of a profitable laundry business.

October 24, 1897, he was married to Caroline Amelie Smallfield, Rev. E. P. Block of the German Lutheran

Church officiating. Three children were born to them, Dorothy Alice Marie, Regina and Nils. Mrs. Koldinger died when these children were yet in their tender years. Mr. Koldinger's sister, Inga Marie Koldinger (born Falsted, Denmark, September 22, 1867, and emigrated to America in 1900), took the mother's place. The loving solicitude of Aunt Marie for these children is well known in our community. Everything that a mother could do is done by Aunt Marie Koldinger. Only a few years ago Grandma Koldinger, the widowed mother of Knud and Marie Koldinger, departed this life at a ripe old age, and she departed as she had lived—a Christian.

Before the Koldingers came to San Francisco they were affiliated with the German Lutheran Church (Missouri). They are of the good old orthodox Lutheran type. And happy were they, when in our city they found a church where the orthodox faith is imparted in the language of the children. At once they became affiliates of Trinity Church. The Koldinger family resides in Guerrero Street, San Francisco.

RUDOLPH GUSTAV STUTE

Mr. Stute was born February 20, 1866, in Lehe, Hanover, Germany. His parents' names were Adolph Friederich Stute and Christine Stute (née Wessel). Mr. Stute received a liberal education, first going through the regular public schools, then taking the classic course at a college in his home town. As a young man, barely sixteen years old, he emigrated to America, arriving at Hoboken, New York. The first fifteen years of his residence in America he spent on the Atlantic Border, sometimes working for others and then again engaged in some business venture of his own. His success varied. Sometimes reverses would come his way—especially during the first few years until he became familiar with industrial conditions in the New World. After he had learned the language of the country and found his bearings in American business life, no more difficulty attended his efforts in carving out a livelihood. During his fifteen years' stay on the Atlantic Coast he had made two visits to the Fatherland, one for pleasure and one on account of his health. In 1906 he decided to come to California, his place of destination being San Francisco. Here he arrived shortly before the city was destroyed by earthquake and fire. It seemed an unfortunate circumstance in the life of Mr. Stute and his family to come here at that time. Many discouraging experiences were made in those calamitous days, but Mr. Stute did not follow the example of many others to leave the place because of misfortune. With undaunted courage, he threw himself into the work of rehabilitating the business of this stricken community, and signal success marked his efforts. In a few years he built up an extensive trade as a delicatessen merchant.

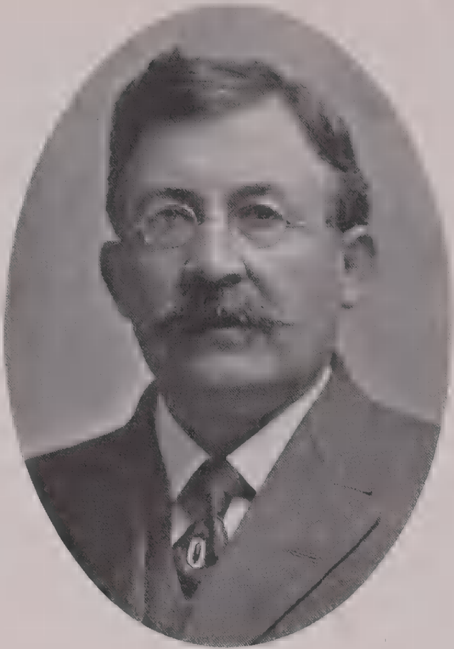
October 13, 1895, Mr. Stute was married to Amanda Dorothea Elizabeth Stute, Rev. H. C. Steup of New York officiating. Three children are born to them, Martha Christine Freda, Emma Johanne Bertha, and Rudolph Adolph Friederich, the last deceased. Ever since the arrival of the Stutes in San Francisco, they have been affiliates of Trinity and in faithful diligence they have shared in the work of the church. No one is more grateful than Mr. and Mrs. Stute for finding a Lutheran church using the English language. They had already experienced how difficult it is to give their children a good religious training by using a foreign language in an American community. The Stutes reside in Mission Street, San Francisco.

RALPH BURR HOWELL

Mr. Howell was born in San Francisco, California, May 22, 1873. His parents' names were Henry Burr Howell and Elizabeth Parker Howell. He was educated in the public schools of this city. His early aim was to obtain a good commercial education. This was realized. And since then the business world of San Francisco has found constant use for his services. His efficiency as a bookkeeper is well known in our commercial circles. It has won for him a reputation which became the valuable asset of his life. Some of the largest concerns of this metropolis have invited him to fill positions of great trust and responsibility.

RALPH BURR HOWELL

Mr. Howell has been very active in the upbuilding of the National Guard of California. For many years he was a member of the State militia. Mr. Howell is also a musician of no small accomplishment. September 6, 1908, he was married to Marie Katherine Norden, a German lady of finest grain. Mr. Howell himself is of English descent. Rev. John H. Schroeder of St. John's German Lutheran Church was the officiating pastor at the wedding. One child was born to them, Margaretha Elizabeth. English being the language they both understood, Mr. and Mrs. Howell joined Trinity English Lutheran Church. The Howell family are of the most diligent members and staunch supporters of Trinity. For the last two years Mr. Howell has served as a member on the board of trustees, and in 1916 he was elected to the position of secretary. The Howells live in Clipper Street, San Francisco.



CHRIS LARSEN

Mr. Larsen was born at Odense, Denmark, July 19, 1858. His parents were Lars Christian Flensted and Anne Sophie (née Nielsen). He received his early education in the church and schools of Denmark. In 1881 he emigrated to America, landing in New York on May 23rd of the same year. Was variously engaged in the states of New York, Minnesota and Iowa, until the summer of 1882 when he moved to California. After working for others for a number of years he went into the contracting business, which he has followed since 1902. Mr. Larsen is rated as one of the large contractors of San Francisco. He has erected a number of big buildings and to him was also awarded some of the heavy contracts in the construction of the Panama-Pacific International Exposition.

November 23, 1889, he was married to Anne Marie Wind, Rev. O. Groensberg officiating. Two sons were born to them, George Flensted, and one, deceased, bearing the same name.

The Larsens are members of Trinity Church; formerly they were affiliated with the work of the Lutheran church at Crockett, California. The German Missouri Synod established an English Lutheran congregation there. The Larsens were among the charter-members and mainstays of the work as long as they remained at Crockett.

The Larsens belong to a family group in the Danish community of this city, which may be designated as the Larsen-Wind circle, comprising several families. Most of them are members or affiliates of Trinity Church. Space would not permit an enumeration of all, but in speaking of the Larsens it is in place to make special mention of the family of Mrs. Larsen's sister, commonly known as the "Wind Family." To Mr. and Mrs. Sören Wind were born four children, Hannah, Adolph, Henry and Anita. They are members of Trinity Church and their service to the church deserves much recognition.

Mr. Chris Larsen's son, George, is following in the footsteps of his father, and together father and son have established a firm under the name of Chris Larsen & Son, contractors. They reside in the exclusive district of Burlingame, California.

CHARLES BOLLIER

Mr. Bollier was born July 1, 1860, at Indianapolis, Indiana. Son of Paul and Elizabeth Bollier. When three years old he was brought to San Francisco, where he was raised and educated. He is a glass-blower by trade, and he had worked at his trade for thirty years, when he became superintendent of the buildings of the College of Physicians and Surgeons in San Francisco. He is married to Emma P. Diegels. Four children born to them, Ethel Elizabeth (now Mrs. A. E. Thompson), Rosco Benjamin, Charles Mervin and Mathilda Gertrude, deceased. Mr. Bollier is one of the early members of Trinity English Evangelical Lutheran Church. Much beloved and respected because of his amiable personality. The Bolliers reside in Harrison Street.

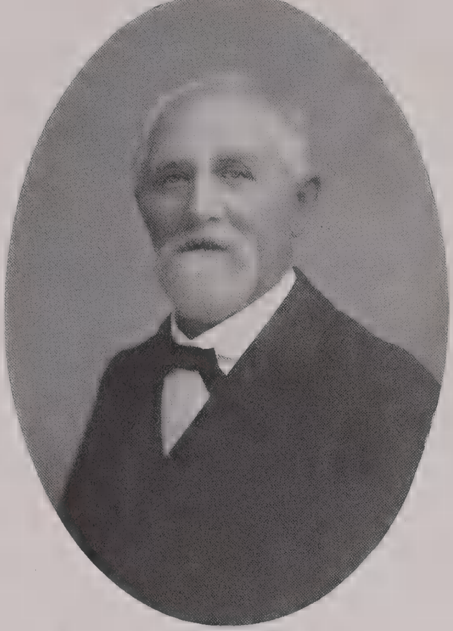
CHARLES BOLLIER

ANDREW ANDERSEN

Mr. Andersen was born at Hjoerring, Denmark, August 21, 1856. His father's and mother's names were Anders Pedersen Hvidegaard and Cecilia (née Nielsen). Received his education in the state schools and church of Denmark. Emigrated to America in 1883, arriving at New York. The metropolis at the Golden Gate, San Francisco, was the objective point of the journey. Mr. Andersen is a tailor by trade. This profession he has successfully followed and is now rated as a man of no ordinary material well-being. Mr. Andersen is a person of reserved habits, industriously applying himself to his business. His integrity has gained for him the respect of all who know him and a large number of warm friends.

September 15, 1884, he was married to Johanna Svennigson. Four children have been born to them, Agnes Hedvig Josepha (now Mrs. Harry Smith), Emil Valdemar, Ellen Edith, and Arthur Andrew. The Andersens are members of Trinity Church. They have been with

ANDREW ANDERSEN



JOHANNES C. TELLEFSEN

the congregation well-nigh from the beginning, joining in March, 1900. Thus they have shared in the often arduous and up-hill work of establishing a new mission. Much credit is due the Andersen family for faithful labor and personal sacrifices in behalf of God's Kingdom. All the children have gone to Sunday-school and have been confirmed in Trinity Church. From 1900 to 1906 Mr. Andersen served as a member on the board of trustees. The Andersen's reside at their own comfortable home in Dolores Street.

JOHANNES C. TELLEFSEN

Mr. Tellefsen was born at Kristiansand, Norway, September 7, 1843. His parents were Christian Tellefsen and Cecilia (née Axelsen). He received his early training in the schools and church of Norway. January 14, 1873, he was married to Julia Kristiansen. In 1881 Mr. and Mrs. Tellefsen emigrated to America. In the early years of his youth he went to sea and this vocation he has followed nearly all his life. Going through the ordinary experience of the sea-faring man, beginning at the lowest rung of the ladder and climbing to the top, he became master of the vessel. In his later years he found the seamen's life on the high seas too strenuous, so he secured employment on one of the ferry boats of San Francisco Bay.

The following children have been born to Mr. and Mrs. Tellefsen: Tobias, Christian, John, Julia (now Mrs. H. G. Oberg), Cecilia, Carl and William—the last three deceased. Mr. and Mrs. Tellefsen were raised in the church, and in the work of the church they have been interested all their life. They belong to the so-called ''old-timers'' of the Scandinavian community of San Francisco. They took part in the initial efforts to establish the church of their fatherland in this city. With a flock of children growing up in an American community they experienced also how necessary it was to establish English Lutheran missionary work. When the Scandinavian Church started English work, Mr. and Mrs. Tellefsen did all in their power to help the cause along. When an English Church was organized they placed their children upon the charter-membership roll. Ever since then the Tellefsen family has been connected with the work of Trinity Church. The Ladies' Society of Trinity will ever remember Mrs. Tellefsen as one of its highly respected and diligent workers. She was also one of the senior members of the society. Only a few weeks ago Mrs. Tellefsen departed this life after a severe illness extending back a considerable time. She died as she had lived—a true Christian. Mr. Tellefsen resides in Richmond, California.

HUGO FRIEDRICH RICHARD BERTHOLD GESSLER

Mr. Gessler was born in New York, November 22, 1854. His father's name was Karl Friedrich Theobald Gessler and his mother's name was Charlotte Emilie Gessler. He was educated in the schools and church of Germany. After a temporary residence in America his father died and his mother returned to the fatherland. Mr. Gessler's father was a man of prominence in the municipality of New York. At his death he held an important position in the surveying department of the city. Many members of the Gessler family have been connected with the civic life of various cities and burghs of the native land. As a young man Gessler learned the trade of photography. For sixteen years he followed this line of work in Hamburg, Germany.

On June 23, 1885, he was married to Dorothea Auguste Elise Grapengeter, Rt. Rev. Hollensteiner of Oldenburg officiating. The following year the young couple emigrated to America, and arrived at San Francisco, where Mr. Gessler has for years been engaged in dairying. At the present time he is in the employ of C. F. Weber Company as superintendent of the building and elevator. Mr. and Mrs. Gessler were given one child, Karl Johannes Emil Peter, who again was taken

HUGO GESSLER

from them at confirmation age. The Gesslers are members of Trinity Church and for many years they have labored untiringly in the furtherance of its cause. The work of Mrs. Gessler assisting in the upbuilding of a Sunday-school in the southern part of the city is worthy of special mention. Ten years were required in establishing on a solid basis a mission there. Many a time the outlook was not very promising and few dared to hope for success. But however discouraging it seemed at times, Mrs. Gessler was never disheartened but continued to labor with unfailing interest. Mrs. Gessler loves to work with children, especially to teach little girls to do fancy work. From time to time she has been laboring with a sewing class and then she would have the little tots give an entertainment, donating the proceeds to the new mission. Her Sunday-school work in Trinity Church is also gratefully remembered. Mrs. Gessler was closely connected with the church in her native country, coming as she does from ministerial circles there (the well-known Schroeders). Her early training undoubtedly accounts for her interest and diligence in the work of God's Kingdom. The Gesslers reside at their own home in Berlin Street, San Francisco.

FREDERICK BOARDMAN FISHER

Mr. Fisher was born at Arrowsic, Maine, October 28, 1864. His father's name was Alfred and his mother's Katie F. Dockham. His forbears came from England. He was educated in the public schools of his home town. January 22, 1887, he was married to Anna Martha Frey, Rev. J. M. Buehler of St. Paul's German Lutheran Church of San Francisco officiating. Mr. Fisher has been variously engaged in the course of years. Unswerving honesty was always his guiding principle in life. At the present time Mr. Fisher is superintendent of the Marquard Apartments in Folsom Street, San Francisco. This position, he, together with his wife, has held for more than two years.

It is many years ago now since Mr. and Mrs. Fisher joined Trinity Church. With the highest regard and deep appreciation the co-workers of Trinity look back upon these years of Christian fellowship with Mr. and Mrs. Fisher. Their exceptional faithfulness in the performance of their duties in the vineyard of the Lord will ever remain as an example worthy of imitation. Mr. and Mrs. Fisher have learned to know that the Lord is good, and that in order to grow in grace a diligent use of God's word is necessary. Hence their places in church are never empty. Special mention, too, must be made of Mr. and Mrs. Fisher's work in the Sunday-school. Much credit is due them for the success we have had in this branch of the church. May the good Lord give them grace and strength to continue their work yet for many years!

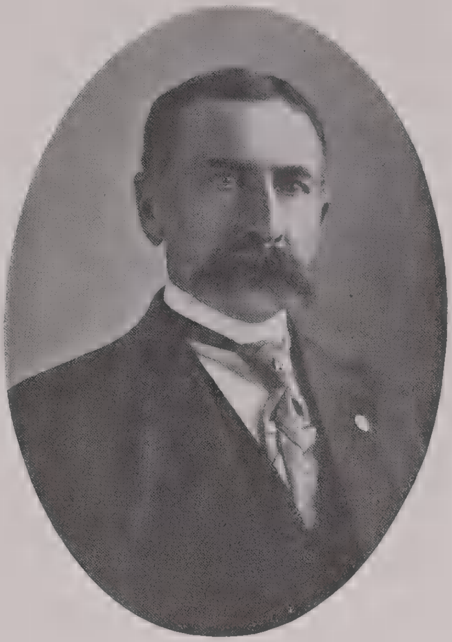
FREDERICK BOARDMAN FISHER

JAMES HANCHER AKARD

Mr. Akard was born in Sullivan County, East Tennessee, July 24, 1870. His parents' names were John Akard and Emma Margaret. He received a good public school education. Being raised on a farm, he engaged in agricultural pursuits. Then he entered the lumber business, which he continued until 1903, when he moved to California, where he is following the carpenter trade.

February 8, 1893, he was married to Mary B. Hancher, her uncle, Rev. J. K. Hancher, officiating. Their union in wedlock has been blessed with eight children, William Clyde, Maggie Lee, Addie Pearl, John Frank, Emma Blanche, Frances Roche, Louise Eleanor, and Ethel Belle. Ever since their coming to San Francisco the Akard family has been closely connected with the work of the church. Being raised in the church and coming from a community where they were active members of the church, Mr. and Mrs. Akard at once set about to find their own church when they came to this city. They are of German descent, but do not speak the lan-

JAMES HANCHER AKARD



GEORGE HANSEN

guage of their fathers. Their work in the church, therefore, has always been in the English branch of the Lutheran Church. Naturally, therefore, it was an English Lutheran Church they looked for on arriving at San Francisco. At that time Trinity Church was only four years old, without a place of its own for worship. The Akards, however, took hold of the work, satisfied if only they were privileged to hear the good old word, though it had to be heard in the midst of the undesirable surroundings of a public hall. And ever since then they have diligently worked in the church, ever showing that this word, "One thing is needful," is the prevailing principle of their life. Mrs. Akard comes from a well-known ministerial family of the German Lutheran Church in America—the Hanchers. Her grandfather and two uncles were ministers of the gospel. When Mr. and Mrs. Akard look back upon their childhood days they find their fondest recollections to be those of a Christian home and God-fearing parents. To establish such a home and be such parents was the object of Mr. and Mrs. Akard when they entered upon the journey of life together. And they have succeeded—by the grace of God. A brother of Mrs. Akard, Mr. Frank Hancher, is also a member of Trinity Church and belongs to the Akard family. The Akards reside in Sanchez Street of this city.

GEORGE HANSEN

Mr. Hansen was born at Als, Denmark, in 1859. His parents were Hans B. Hansen and Anna Dorothea (née Vrang). He was educated and confirmed in the home country. From his boyhood he aspired to become a farmer, and in this occupation he was engaged until he emigrated to America in the fall of 1881. Upon arrival in California he sought work on a farm. After two years' stay there he moved to San Francisco and found employment at the Spreckels sugar refinery. There he remained until 1890, when he entered into the coal business. The George Hansen coal firm is located at the corner of Harrison and Twenty-first streets, San Francisco. For twenty-five years he has successfully followed this line of business and has built up a lucrative trade, and is rated in this community as a man in very comfortable circumstances.

In 1883 Mr. Hansen married Anna Margarethe Boysen. Two children have been born to them, Alma Marie and Clara Doretta. George Hansen and his family are members of Trinity Church, where both children have gone through the Sunday-school and received instruction for confirmation. The Hansen family is favorably known in and outside the circles of the church. They are looked upon as people always willing to co-operate in behalf of all movements looking to the welfare of the community. The Hansens live in their own home in Harrison and Twenty-first streets, San Francisco.

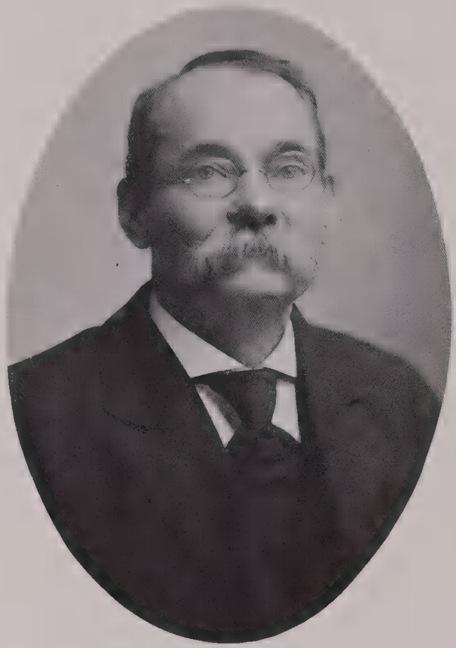
SAMUEL WILLIAM BRAUNWARTH

Mr. Braunwarth was born at Gallien, Michigan, August 7, 1871. His father was Rev. William Braunwarth of the German Missouri Synod. His mother's name was Johanna. November 19, 1897, Mr. Braunwarth was married to Marcella Joshine Haines, Rev. E. Nelander officiating. Five children have been born to them, Frederick Robie, Constance Eunice, Ernest Samuel Erick, William Raymond, and Dorothy Marcella, the last two deceased. He received his Christian and secular education in the church and the public schools of his native town. Mr. Braunwarth is a baker and a miller by trade, a man of excellent parts, in all things giving evidence of a sound training in a Christian pastor's home. Mr. Braunwarth and family are members of Trinity Church, always fulfilling their duties in faithfulness and sincerity. They reside at their own home in Prospect Avenue, San Francisco.

CARL ANDREAS NIELSEN

Mr. Nielsen was born May 26, 1850, at Tangen, Hedemarken, Norway. His parents' names were Ole Nielsen and Louise Ulrike, née Pedersen. Mr. Nielsen was by nature mechanically inclined. As a boy the pastime he most coveted was an opportunity to make things. His parents desired him to become a printer. Only reluctantly he complied with their wishes. When eighteen years of age he began to learn the printer's trade. But he could not become reconciled to this work. The desire in him to make things could not be stifled. Finally he was permitted to enter the field of his choice—that of becoming a mechanic. In this province of labor Mr. Nielsen soon excelled and reached a point of considerable prominence. In 1872 he emigrated to America. After a couple of years' stay in Chicago, where he constantly applied himself to his trade, he moved west to San Francisco, hoping there to find a climate more conducive to health. San Francisco became his home town until his death, September 11, 1914.

Mr. Nielsen came from a Christian home. His early training determined the course of his life spiritually. Coming to the New World, a stranger among strangers, he did not do as too many do—abandon religion, church, God, completely surrendering to a life only for this world. Mr. Nielsen was not this kind of a man. He took with him a precious heritage from his Christian home—a thorough grounding in Christian doctrine—and this he jealously guarded to his dying day. Upon his arrival here he set about to find the church of his fathers. He would never tire of telling how happy he was the first time he heard a Lutheran sermon preached in the language of his native country. Mr. Nielsen belonged to the early members of Trinity Church, where his place was never empty. As a member Mr. Nielsen performed his every duty in utmost candor and sincerity. When the message of his death came, the members of Trinity were moved with a deep feeling of sorrow, recognizing the fact that one of the faithful workers had departed, leaving a void that could not be filled.


CARL ANDREAS NIELSEN

Mr. Nielsen was married in October, 1880, to Theresa James Collins. Two children were born to them, Charles Collins and Frances Louise. The Nielsens reside in Mission Street, San Francisco.

History of Grace English Evangelical Lutheran Church

BY REV. CARL L. FOSS

GRACE English Evangelical Lutheran Church, San Francisco, California, was organized by Rev. E. M. Stensrud on September 17, 1908. The first officers of the congregation were: Rev. E. M. Stensrud, chairman; Chas. Daiss, secretary; Chas. Schlichtmann, treasurer; Philip Herold, Albert Lunde and Chas. Daiss, board of trustees. On December 14, 1908, the congregation was incorporated under the State laws.

The history of the congregation up to the day of the laying of the corner-stone of the present church edifice, on Sunday April 28, 1912, is best told in the words of Rev. E. M. Stensrud as he related it at that event:

"October 4, 1903, a little Sunday-school was started in a vacant saloon in San Bruno Road—only a few blocks away from this corner-stone. There was sown the first seed of Grace Church. In this connection I wish to point to a few facts leading up to the first beginning of our church work in this district. In the fall of 1903 a Christian mother came to my home, and kindly requested me to christen her children. I complied with the request. The same Christian mother urged upon me the necessity of commencing a Sunday-school in that part of the city. She was solicitous to know if I could help them. To take up any extra work at that time seemed impossible to me. Our English mission downtown was new and far from firmly established. All my time and attention were needed there. 'But nobody is doing anything for our children,' argued the Christian mother. Then I asked if many people of our faith were found out there. 'Yes, many of them,' was the answer. After a while I consented to accompany that same good mother on a trip round the district, to visit a few homes.

"In two afternoons, thirty-seven children were found, whose parents promised to let them go to our Sunday-school, if it were started. I began to see the need of such work in the district, and that it was my duty to help them, if I possibly could. But when should I find time? My Sundays were occupied. 'The afternoon, too?' said the good mother. The point of my argument was gone. Now the next difficulty presented itself—the finding of a meeting-place, for none such there seemed to be. Not even a hall of any kind. A vacant saloon had been in evidence during my entire hunt for a meeting-place, and, singularly enough, that same vacant saloon was finally secured, and a Sunday-school was begun. Only a handful met, but God blessed the work, and today we see before us some visible signs of His blessings. God used a Christian mother to open the door for this mission, now known as 'Grace Church.' On this occasion I can not refrain from mentioning that Christian mother's name—Mrs. Anna Else Lunde. And here I wish to add, that in the further development of this mission especially, the Christian mothers have been potent factors. No sooner was the Sunday-school started than requests were heard from many sides, urging the organization of a Ladies' Aid Society. Some time elapsed however, before the step was taken. Such a society was not started before May 12, 1907. There were nine charter-members, whose names I here append: Mrs. Chas. Daiss, Mrs. Anna E. Lunde, Mrs. Hugo Gessler, Mrs. Ph. Herold, Mrs. P. Sorensen, Mrs. H. Schultz, Mrs. Chas. Schlichtmann, Mrs. K. Kruse, and Mrs. E. M. Stensrud. The present number of the members of the Ladies' Aid Society of Grace Church is twenty-four, not a large number, but the Lord has given these Christian women grace to do much for His kingdom. May the Lord's continued blessings be with these diligent workers, and may He add many more of their kind to their number!

GRACE ENGLISH EVANGELICAL LUTHERAN CHURCH

"In June, 1904, the Sunday-school was invited to move into a little chapel in Bacon Street near Berlin. Four years previously this little chapel had been built in an effort to establish a union Sunday-school, but the attempt was soon abandoned. Through the kindness of Mr. and Mrs. Cailteaux the Sunday-school was enabled to secure the chapel site for the nominal sum of $225. Messrs. Daiss and Baur advanced the money without interest, and permitted the Sunday-school to pay it back whenever able to do so.'

"May 13, 1908, a church site fifty-five by one hundred feet in the corner of Bacon and Berlin streets was purchased at the price of $1,500 cash. This transaction was made possible by the exceeding generosity of the late Mr. Charles Daiss and Mr. Philip Herold, who advanced the money and permitted the church to pay it back whenever able to, and without interest.

"The young congregation has given ample proof of unusual activity and vitality. In a very short time all debts on the chapel and church sites were paid, and attention was at once directed toward the raising of funds for the church building. God has been with the little mission and has blessed its every move. At the beginning of the new year, 1912, the congregation was in a position to let the contract for a church edifice. The contract was awarded to Mr. E. A. Tessmer, a member and trustee of the church. The building, without furnishings, will cost $6,000. The major portion of this sum has been raised among the members by subscriptions and loans without interest. A fortunate circumstance, which I owe to mention in this connection, and the whole congregation wishes to do so in grateful acknowledgment, that the builder, Mr. E. A. Tessmer, will furnish the funds that are lacking to finish the building and leave the time for reimbursement to the convenience of the congregation. Without Mr. Tessmer's liberal offer we feel free to confess that our church building would not have gone up at this time. May the Lord, who disposes our will to submit to His good and gracious will, continue to bless this mission and all the willing workers connected with it. So far the Lord has helped; we pray for His continued help. To Him all glory and honor!"

Sunday, April 28, 1912, the corner-stone of Grace English Evangelical Lutheran Church was laid. It was a day of rejoicing and festivity among the Lutheran church people in the “south town quarters” of our city. The festive spirit was heightened by the generous participation on the part of our church people from the entire bay cities' community. The structure, already under roof and planned for a seating capacity of three hundred persons, was crowded to overflowing. The large assembly, the many countenances glowing with sympathy and gladness, gave expression to the sentiments elevating their souls.

Prior to the laying of the corner-stone services were held in the church, special music being rendered by the choirs of Grace and Trinity English Evangelical Lutheran churches. The edifice, which is a shingled structure, built on classic lines, was simply but effectively decorated for the occasion with callas and evergreens.

The program here appended will show the course of the solemnities: Introductory, Rev. E. S. Belgum; “Lead Me, O Lord,” Mr. P. J. Oksen; Sermon, Rev. E. M. Stensrud; Anthem, Trinity and Grace Church choirs; Address, Rev. M. H. Liebe; “A Song of Praise,” Mrs. Fanniel Marsh; Address, Rev. O. Groensberg; Trinity and Grace Church choirs; Reading of History of Congregation and Address, Rev. S. B. Hustvedt; “The Earth Is the Lord's,” Mr. P. J. Oksen; Organist and Choir-director, Mrs. E. M. Stensrud; Offering; Laying of Corner-stone, Rev. E. M. Stensrud, assisted by all pastors present and officers of the church.

The introductory sermon was based on 1 Cor. 3, 11: “For other foundation can no man lay than that is laid, which is Jesus Christ.”

HENRY ALBERT TESSMER

Henry Albert Tessmer, born Colberg, Prussia, April 7, 1842. His father's name was Rev. Gottfried Tessmer and his mother's name Henrietta Louisa (née Till). He received a good education in the public schools of Germany. Emigrated to America in 1856. He was variously employed until he became permanently engaged in shipbuilding, and later learned the trade of carpenter. After some years' experience at this trade he began to take building contracts, and is now a man of prominence in his profession. He has been very successful and acquired considerable competence. Integrity has been the shibboleth of Mr. Tessmer's life. As a man whose word is law he is universally known in this community.

December 23, 1869, he was married to Doretta Muhlman. One child has born to them, Etta Hermina, who for many years has been teaching in the public schools of San Francisco. The whole Tessmer family are untiring workers in Grace Church. The Sunday-school, Ladies' and Young People's societies all derive the benefit of their unabating interest and self-sacrificing efforts.

“We meet here to-day,” said Rev. Belgum, “to rejoice that another church has been added to the Lutheran forces. The faith on which you have builded your church is a wonderfully solid foundation, but nevertheless you must remember that the forces of Satan are ever at work to undermine that foundation, and he works in various guises. Now he is using science and the so-called ‘higher criticism’ to show that the Bible is wrong; but if you retain your faith, Satan will never see the day when the foundation on which you built this pretty church will be shaken.”

The festival sermon was based on 1 Kings 8, 57: “The Lord, our God, be with us as He was with our fathers!” In this sermon was reviewed the beginning of Grace Church and its struggles up to the present time.

“It was eight years ago,” he said, “when this little mission was commenced and at that time we were forced to be frugal, indeed; but the Lord has assisted us, and we may now thank Him that we are not an unimportant factor in the Lutheran fold. And I assure you that there is no greater fold in the world, some may have more ornamental churches and some may be more wealthy, but there is no purer fold or doctrine than the Lutheran—the church of your fathers. It has only one object—to teach the pure word of God.

“Our church is not a church which grows rich and makes many poor, but a church which stays poor and makes many rich—rich in the knowledge of God's blessings. Only one danger confronts us and that is seeking after popularity. Some churches, like some people, strive for popularity with the masses and sacrifice more important things. We must hew to the line and rigidly observe the religion of our fathers. It is the internal things which count, and not the external.”

The other addresses embraced greetings from the sister congregations together with words of cheer and encouragement that added greatly to the impressiveness of the occasion.

Rt. Rev. G. A. Bernthal, president of the California District of the German Missouri Synod, who was unable to be present, was represented by Rev. M. H. Liebe. Rt. Rev. L. C. Foss, who had hoped to be present, telegraphed his inability to come and authorized the pastor of the church to perform the official act of laying the corner-stone.

The festival offering, announced for the benefit of the church building fund, resulted in the sum of $163.

DEDICATION

September 22, 1912, was again a day of rejoicing for Grace congregation, for on that day was dedicated their house of worship. The dedicatory sermon was preached by Rt. Rev. O. P. Vangsnes, president of the Iowa district, on the text: Isa. 25, 6-8. The following pastors took part in the service of dedication: Stensrud, Foss, Groensberg, Pedersen, Borup, Rt. Rev. Nordby, Belgum and Ensrud, and Rev. Brönö of the United Church who brought greetings from his congregation.

Rev. Stensrud expressed the gratitude of Grace Church to the ladies of the congregation, especially to Mrs. Susan Daiss, whose liberal donations and loans made free of interest, have been a material aid toward bringing the building of the church to a successful completion.

Mr. Henry Tessmer and the treasurer of the congregation, Mr. Chas. Schlichtmann, Sr., were also honored with special mention, since the former by advancing the necessary funds, and the latter by his efficient stewardship, had rendered invaluable service to the congregation in its building venture. Others who aided materially in bringing matters to so satisfactory a culmination are the Misses Agnes Lunde, Dora Andersen, Lilly and Ruby Daiss, Edith Dunn (Mrs. Chas. Sehlichtmann, Jr.), and Mrs. H. Gessler.

The church was built at a cost of $8,000.

From its inception until the early part of the year 1913, Rev. Stensrud served Grace congregation as its faithful and efficient pastor. His work had prospered so well here and also in his downtown congregation that the combined demands of the two charges upon his energy and time became so great, that he felt that he could no longer serve both congregations as efficiently as he should. A call was therefore extended to Rev. M. B. Backerud of Crosby, North Dakota, who accepted. Rev. Backerud was installed by Rev. Stensrud as pastor of Grace Church on July 13, 1913.

On the evening of August 13, 1913, a meeting of the young people of the church was called for the purpose of organizing a Young People's Society. On August 27 was convened the first business meeting. A constitution was read and accepted and officers elected. The election resulted: Rev. M. B. Backerud, president; Albert Lunde, vice-president; Emma Dunn, secretary, and Chas. Schlichtmann, treasurer.

In January, 1915, Rev. Backerud tendered his resignation from the pastorate of Grace Church to take effect in March. In the meantime a letter of call was extended to Carl L. Foss, Stud, Theol., St. Paul, Minnesota, who accepted and was ordained at Grace Church by Prof. E. Hove of Luther Seminary, St. Paul, Minnesota, on Sunday, May 30, 1915.

The present officers of the church are: Pastor and chairman, Carl L. Foss; secretary, Albert Lunde; treasurer, H. E. Tessmer; trustees, C. L. Lindh, A. Hain, E. Balkovitch; wardens, Theo. Olson, M. Balkovitch, A. Balkovitch, and the pastor ex-officio.

Officers of the Ladies' Aid Society: President, Mrs. N. Campbell; treasurer, Mrs. A. E. Lunde; Secretary, Mrs. Chas. Daiss.

Officers of the Young People's Society: President, Mrs. N. Campbell; vice-president, Stella Schlichtmann; secretary, Jenny Lindh; treasurer, Albert Lunde.

St. Paul's English Evangelical Lutheran Church of Oakland, California

By Rev. S. B. Hustvedt,
Supplemented By Rev. Jos. H. Berg.

ST. PAUL'S English Evangelical Lutheran Church was organized November 3, 1897, by Rev. E. M. Stensrud of San Francisco, a preliminary mass-meeting having been held August 3, at Capt. N. Nelsen's residence at 416 A Street. In April, 1898, the present church site in Thirty-second and Linden streets was purchased for the sum of $725. On June 3d of the same year the congregation decided to build a church and Rev. Stensrud was chosen to solicit subscriptions. When, on February 7, 1900, it was resolved to begin the erection of the building, nearly $1,200 had been secured by subscription and by the efforts of the Ladies' Aid Society, while a loan of $500 had been granted by the Church Extension Committee of the Synod.

In the meantime Rev. J. N. Andersen of Omaha, Neb., had been called to take permanent charge, relieving Rev. Stensrud, who had served the congregation since it was organized. The new pastor was installed by his predecessor October 29, 1899. He continued the subscription and a building committee, consisting of N. S. Brown, S. Anderson and George Hall, was elected. Under their supervision the church was completed at a total cost of $1,955. The dedication took place October 14, 1900, Rev. Stensrud officiating.

In 1902, Rev. Andersen was succeeded by Rev. W. A. Larsen. During his pastorate the remaining debt on the church property was paid, largely by the efforts of the Ladies' Aid Society. Work was begun also in Fruitvale, where a Ladies' Aid Society was organized and a Sunday-school established.

In 1905, Rev. Larsen received a call to another charge and Rev. S. B. Hustvedt became the minister of the church, and served the congregation for seven years, leaving in the early summer of 1912.

Rev. J. O. Ensrud was installed August 18, 1912, Rev. E. M. Stensrud officiating. June 30, 1913, he accepted a call to Crookston, Minnesota, and Rev. Jos. H. Berg was called. He was installed by Rev. Stensrud on May 10, 1914.

In 1909 a hall was built as an addition to the church for the use of the Sunday-school and the various societies and for occasional gatherings. Besides, new pews and windows were installed in the church and the whole building painted. These improvements were made at a total cost of almost $2,200; all of which had been raised by subscriptions of members and friends of the church, and by the generous aid of the Ladies' and Young People's Societies.

ST. PAUL'S ENGLISH EVANGELICAL LUTHERAN CHURCH

The officers of the church are as follows: H. J. Anderson, secretary; C. Texdahl, treasurer; Capt. C. J. Fosen, Capt. J. Hanson, G. Brown, trustees; Capt. M. Olson, F. S. Frank, G. Hanson, wardens; Rev. Berg, ex-officio.

The Sunday-school was organized by Rev. Stensrud on August 5, 1897. The work is graded. Luther's Catechism, the Explanation, and the Bible History are the books used. There is a Bible class, open to all in and above the age of confirmation. Its present enrollment is 50 pupils and 6 teachers. A library is maintained.

The Ladies' Aid Society was organized in September, 1897, with a membership of 12. Its present number is 26. The purpose of the society is to work for the general interest of the church. In the course of years it has been of great service to the congregation, financially and otherwise. The society has also interested itself in missionary work, to which it has contributed from time to time. Its officers are as follows: Mrs. Anna Brown, president; Mrs. C. W. Christiansen, vice-president; Mrs. M. Nelson, secretary; Mrs. C. J. Fosen, treasurer.

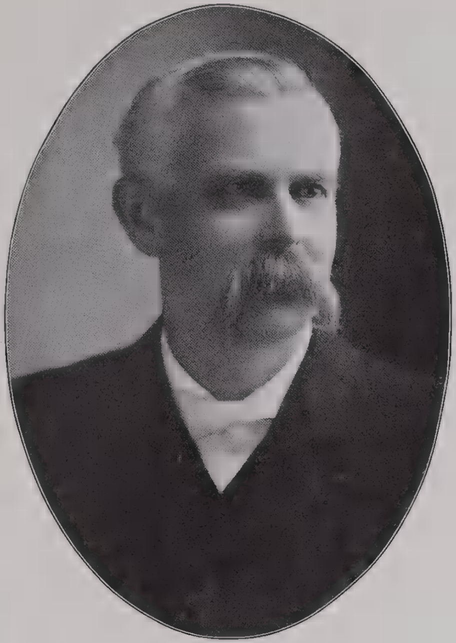
The Young People's Society was organized in 1900. Its aim is to promote the religious, moral and social life of its members and of the church. It has contributed considerably to the building fund of the church and to the running expenses. Meetings are held twice a month. The first meeting is devoted to business, programs and sociability; the second, to lectures, music and discussions of themes religious and historical. It has 46 members. The officers are as follows: Miss Constance Aanonsen, president; Miss Olive Texdall, secretary, and Miss Hannah Johnson, treasurer.

The Choir, a valuable adjunct to the worship of the church, is under the direction of P. J. Oksen. Miss Evelyn Ingbretsen is organist.

SEVERIN ANDERSON

Mr. Anderson was born at Tonsberg, Norway, November 28, 1848. His father was a sea-captain. His mother died in his tender years, so whilst very young Severin was compelled to leave school and go to sea with his father. They sailed for about ten years, visiting almost every port in the world, but at the solicitation of his brother, Julius, he came to California and in the seventies arrived in San Francisco. Variously employed for several years. Secured a position in a carpet store. This became the turning-point in his life, now learning the business he pursued to the end of his days. His conscientious work earned for him the favor of the firm. Beginning at the lowest rung of the ladder he soon found himself at the top. In March, 1892, started a carpet business of his own in the city of Oakland. Mr. Anderson was always seen at the head, never trailing behind. So in business. Only the populous center of a big city would satisfy Mr. Anderson's ambition as to business location. Hence in the course of years the S. Anderson firm has been seen in Washington, Broadway and Thirteenth streets, where the masses surge from morning till night in the ever-growing community of Oakland.

Christmas eve, 1876, Mr. Anderson married Fredrika Hedemark. The wedding ceremony took place at Our Savior's Scandinavian Evangelical Lutheran Church of San Francisco, Rev. Lauritz Carlsen officiating. In church the young couple began their married life by asking God's blessing upon their union; in church they con-



SEVERIN ANDERSON

tinued until God in His wisdom dissolved the union. While residing in San Francisco in the days of Reverends Hvistendahl, Carlsen and Groensberg they were members of Our Savior's Church. After moving to Oakland they became staunch supporters of Rev. I. L. P. Dietrichson in his efforts to establish a Scandinavian Lutheran congregation. Children had now been born to Mr. and Mrs. Anderson. Experience had taught how difficult it is to preserve the children's interest in the church with a foreign language as the medium of speech. Therefore it became a vital purpose in Anderson's life to establish an English Lutheran Church in Oakland. The realization of this purpose was made possible, when, in the summer of 1897, the Synod of the Norwegian Evangelical Lutheran Church of America decided to take up English Lutheran missionary work in Oakland. Rev. E. M. Stensrud, residing in San Francisco, was sent as missionary to the place. He started the work in July of the same year. A steady growth was experienced. The Lord blessed the untiring efforts of a few members who, together with the pastor, were determined to succeed. Among them Mr. Anderson was a leader. St. Paul's English Evangelical Lutheran Church was organized November 3, 1897. St. Paul's Church enjoys the distinction of being the first distinctively English Lutheran Church of the Norwegian Synod.

Five children were born to Mr. and Mrs. Anderson: Harry S., Ella C., Cornelia F., Frederick N., and Herbert J. Harry and Fred now running the father's extensive business; his daughter Ella married to Dr. Louis Graham, a prominent San Francisco dentist; Herbert is a wholesale coal merchant; Cornelia, the widowed mother's home companion and comfort. Mr. and Mrs. Anderson's children reflect honor upon their parents. They have proven to be chips of the old block. Cornelia's work in the church from her earliest teens as organist, leader of the choir, and Sunday-school teacher deserves special mention. The eldest son, Harry, has risen to great prominence in the political life of Oakland, at present holding the position of Commissioner of Public Works.

The influence of a good man is felt beyond the immediate circle of the community in which he lives. It endures beyond the limits of this earthly life. Like rings forming upon the placid waters, it goes on and on, until it reaches the shore—eternity. This may be said of Mr. Anderson. His influence as a Christian gentleman, as a loyal citizen, as a loving father and tender husband, and as a faithful churchman, will never die.

May 10, 1913, Mr. Anderson died, and he died as he had lived—a Christian.

THE OLSEN AND BROWN FAMILIES OF ST. PAUL'S CHURCH, OAKLAND

It is common experience on the mission field to find a few willing workers at every place. We may point to the work in establishing our church in Oakland as one of the many incidents bearing out this fact. Our missionary efforts in that city date back to the seventies. In those early days following so closely upon the adventurous period of gold discovery, there was not, in this part of the Golden State, much interest taken in the cause of God's church. However, a few there were, here as elsewhere, desirous of seeing established in their midst the office of the word. Among these were Captain and Mrs. M. Olsen and Mr. and Mrs. N. S. Brown. These families, together with a few more, became instrumental in the upbuilding of our fathers' church in the city of Oakland. But our missionary activities in the Oakland community was accompanied with no little adversity. At times it seemed a hopeless task. Our people did not respond. The Olsens and the Browns, however, were not among those who gave up or despaired of eventual success. Their desire to establish a church overshadowed every disappointment and overcame every obstacle. 1897 came and Oakland had as yet no Scandinavian church. It was in the early summer of that year that Mrs. Olsen and Mrs. Brown came to San Francisco and made an appeal to the president of our Synod, Dr. Koren, and to the president of our district, Rt. Rev. B. Harstad, earnestly beseeching them to help in a final attempt to establish a church in Oakland. As a consequence of this appeal, St. Paul's English Evangelical Lutheran Church was organized. It is soon nineteen years ago since that visit was made—a visit so significant to the cause of our church in Oakland. Still these Christian mothers and their families belong to that nucleus of members who carry the burden and the heat of the day in St. Paul's. The history of St. Paul's Church, too, has been one of ups and downs, more especially of downs. But for a few members like the Olsens and the Browns in the fold, the little ship of the church would have foundered years ago.

Here the writer desires also to make special mention of Mrs. Brown for the part she took in keeping the congregation together and saving it from disorganization in that gloomy period not long ago, when the congregation again lost its pastor after being without one for nearly two years. It takes faith and courage to be the lone watcher on the bridge when the ship is sinking. To a few members of St. Paul's Church belongs this honor—and especially to Mrs. Anna Brown.

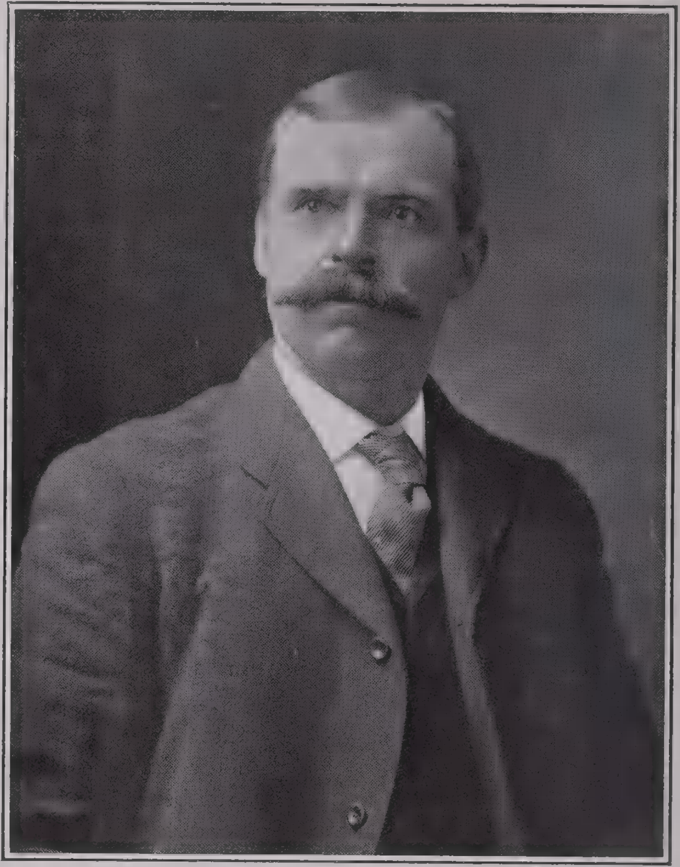
Mrs. Brown is a widow. Her husband's name was Nels S Brown, born in Hardanger, Norway, February 26, 1851. His father's name was Sjur Berven and his mother's name, Anna Berven. He was educated in Norway and emigrated to America in 1871. On October 4, 1878, he was married to Anna Helena Vieg. Seven children were born to them; Albert S., Gustav W. and Scott M. are living. Mr. Brown was a wagon-maker by trade and followed this vocation for many years in Minnesota and Oregon. In 1875 he moved to California on account of poor health. A few years later he died. The Browns have been very successful in business. They are now in comfortable circumstances, residing at their own home in Glen Avenue, Oakland.

Captain Mathias Olsen was born in Utsire, Norway, July 11, 1850. His father's and mother's names were Ole Baardsen Kvalvig and Thorine Thorsdatter Kvalvig. Mr. Olsen received a good education in the home country. His aim was to take up the seafaring life and for this vocation he equipped himself. He emigrated to America in 1872, arriving in San Francisco via New York and around the Horn. For several years he was engaged in coastwise trade on the Pacific Coast. In 1883 he became master of the vessel. In 1910 he quit the sea after following that profession for forty years.

On September 21, 1877, he was married to Bertha Andresen. No children have been born to Mr. and Mrs. Olsen. The Olsens are very charitably disposed, and are liberally donating of their comfortable fortune to institutions of charity, particularly to those within the pale of their own church. For many years they resided at their beautiful home in East Oakland, but of late they have spent their days in their country home at Walnut Creek.

CAPTAIN C. J. FOSEN

Captain Fosen was born in Norway, March 18, 1859. When a boy he was engaged in fishing and then shipped as a sailor, and for a short time traded to the various ports of Europe. On December 18, 1880, he came to San Francisco and worked in the lumber woods in Mendocino County, California. Then he returned to the sea, shipping on coastwise vessels engaged in carrying lumber. Became mate and finally captain. He entered the employ of the Robert Dollar Company as captain of the *S. S. Newsboy*. The circumstances connected with his employment by that firm show the real character of the man. To quote the president of the firm, Robert Dollar, "He owned three-sixty-fourths in the vessel. The then owner, Mr. Mitchel, required Fosen's signature to get a majority to control the vessel. I asked him to sign for me, which he refused to do, saying he had promised Mitchel. In a few days I had bought from others enough shares to own more than one-half. Then Captain Fosen thought he had lost his job, but I told him that he was the kind of a man that I wanted because he stuck to his promises, even though it was to his own detriment. This was an indication to me, I told him, that he was strictly honest and could be relied on."



CAPTAIN C. J. FOSEN

To conclude, Mr. Dollar said, "This trait in my esteemed friend, Captain Fosen, has been borne out absolutely by subsequent events. He is still the honored representative of my firm and he has been entrusted with tens of thousands of dollars every year. Quoting the poet Burns, it can be truly said of Captain Fosen that 'An honest man is the noblest work of God.' These three words may be put on the Captain's tombstone, 'faithful, just and true.' "

In 1886 the Captain made a trip to Europe. On this visit to the Fatherland the good Lord led him into the company of the young lady who became his helpmate in life. October 26, 1887, they were married at San Francisco. Two years later they established their home in Oakland, California, where they have lived ever since. Seven children have been born to them. Captain Fosen is a charter-member of St. Paul's English Lutheran Church, where he and his family have been of the faithful and untiring workers all these years.

A Short History of Our Savior's Scandinavian Lutheran Church of San Francisco

By Rev. J. W. Johnshoy

AMONG the Scandinavians of San Francisco, the first efforts at church-work were made by the German Lutheran pastor, Rev. J. M. Buehler. His field, however, being pre-eminently among the Germans, the work among the Scandinavians, was on his part, merely incidental. Thus we find that prior to the year 1870 no church organization had been effected among the Scandinavians of San Francisco.

Concerning the first definite church organization we note the following among the records of Our Savior's Church: "Knowing that there were in San Francisco thousands of Scandinavians, but no Scandinavian Lutheran church, the Norwegian Lutheran Synod of America appointed Rev. Chr. Kvistendahl, of Milwaukee, Wis., to go thither and attempt the organization of such a church. He arrived October 14, 1870, and preached his first sermon October 16. November 20, 1870, a congregation was organized and the said Rev. Chr. Kvistendahl was unanimously called as the future minister of the church."

Thus the first church organization was formed. A constitution was framed and immediately subscribed to by fifty-six members. Of these original members we can publish the following names: G. O. Taaffe, O. W. Kling, J. G. Nelson, C. Janson, A. Peterson, N. S. Helmers, H. C. Abel, P. Magnus, Th. Thornsen, J. Boysen, F. Claussen, C. Wilson.

OUR SAVIOR'S SCANDINAVIAN LUTHERAN CHURCH

This being a Scandinavian congregation it was found expedient to specify that the board of trustees should be composed of nine members, three from each nationality. The roll of the first board of trustees is the following: O. W. Kling, G. O. Taaffe, J. G. Nelson, A. Peterson, N. S. Helmers, Th. Thornsen, J. Boysen, C. J. Swendsen, J. O. Bruun.

When the congregation had thus been firmly organized, Rev. Kvistendahl left for Milwaukee, Wis., to arrange matters in his former charge. On April 21, 1871, he returned to San Francisco and entered upon his duties as pastor of Our Savior's congregation. As for a place of worship the congregation could not yet afford to build a church of its own, so to supply this imminent need they rented St. Paul's German Lutheran Church in Mission Street, near Sixth. But the only time of day at which this was available was 2:30 p. m. Thus, forenoon services could not be conducted, and this was keenly felt as a detriment to the work.

Rev. Kvistendahl served the congregation for a period of five years. He preached his farewell sermon on August 29, 1875, and he was succeeded by Rev Lauritz Carlsen, who preached his initial sermon on Christmas Day of the same year. He served the congregation for three years. During these years, earnest missionary efforts were made for the purpose of establishing preaching places in towns bordering San Francisco. Thus, frequent services were held at Napa, San Rafael, San Lorenzo, and Oakland.

By this time, sufficient money had accrued in the church treasury to purchase a house and lot in Sherman Street. This transaction was made in January, 1879. The house was remodeled and made suitable for church-work. It furnished an auditorium with a seating capacity of two hundred, and in addition to this, there were several rooms adapted to use as a parsonage.

At the end of a little more than three years' service, Rev. Carlsen accepted a call to go as missionary to Australia. He departed from San Francisco on November 24, 1879, and as his successor was called the Rev. I. L. P. Dietrichsen, who was already present at the time of Rev. Carlsen's departure.

On account of the large and important mission field of the Pacific Coast, which was primarily under the care of the mother church in San Francisco, in the year 1880, Rev. O. Groensberg was called as assistant pastor. From Our Savior's Church, missionary efforts were extended way north into Washington and Oregon. It was Rev. Lauritz Carlsen of San Francisco, who, in August, 1876, organized the first two congregations in that region; namely, in Stanwood, Washington, and in Portland, Oregon.

In 1880, Rev. O. Groensberg was called as pastor of Our Savior's congregation. Having served for fifteen years, in 1895, he accepted the position as president of Pacific Lutheran Academy, Parkland, Washington. He remained there until the summer of 1897, when he was called as missionary of Central California. Rt. Rev. B. Harstad and Rev. E. S. B. Hoel served the congregation until Rev. Groensberg was again called and continued as pastor till the year 1913, when he accepted the position as superintendent and pastor of the Scandinavian Lutheran Seamen's Mission of San Francisco. This Seamen's Mission also owes its first impulses toward organization to Our Savior's Church.

In the year 1897 the congregation commenced more energetic work in the English language and for that purpose called Rev. E. M. Stensrud. From these initial efforts have sprung up three flourishing congregations—two in San Francisco, and one in Oakland.

During the years 1913-15, Our Savior's congregation has been served temporarily by Rt. Rev. L. C. Foss and Rev. R. U. Evjenth, until August, 1915, when Rev. J. W. Johnshoy was installed as pastor. The present Board of Trustees are: A. R. Jorgensen, B. L. Hoff, R. U. Evjenth, T. Petersen, L. Soiland.

Concerning the congregation's property and church building, we have already noted the first transaction. In connection therewith, there is an interesting reminiscence of a plan which never materialized. It was in the days of Rev. Dietrichsen, when certain wealthy men conceived the idea of erecting a magnificent Scandinavian Lutheran Cathedral in the center of the city. The cathedral plan comprised a large central auditorium and two spacious wings facing opposite streets, so that both Scandinavian and English services could have been conducted simultaneously. Among the promoters of this plan were men of note, as the Danish millionaire, Captain Chas. Nelson, and Captain Bennet H. Madison.

The congregation built its first church in Howard Street, near Thirteenth Street, in 1885, and dedicated it in November of the same year. In 1888 a parsonage was built on the same lot. In 1904 the church was renovated and a basement constructed. This completed structure was entirely destroyed by the great fire of 1906. The work of rebuilding was immediately commenced and soon the congregation had erected on the same site a new church edifice even larger than the old. This new church was dedicated May 30, 1915. Dr. H. G. Stub delivered the dedication sermon. August 4, 1907, the cornerstone was laid by Dr. V. Koren. Thus, Our Savior's congregation can again assemble in its new church home, completed.

Looking back upon the early years of struggle and the decades of hard labor, the annals of the church bear witness that the word of God does not return void.

The Scandinavian Lutheran Seamen's Mission of San Francisco

IN REALITY this Mission is as old as our church-work in San Francisco. The early members of Our Savior's Scandinavian Lutheran Church were in the main seafaring people. The names of a great many well-known men, who down through the years have been among the leading spirits in the shipping circles of the bay cities, are found on the charter-membership roll of Our Savior's Church. Comparatively few landmen belonged to this church in its earliest years. In a preeminent sense, therefore, this church was, to begin with, a seamen's church. Its location, too, facilitated its work in the sea-going and shipping world, being not far from the so-called ''City Front.'' In the course of time, however, this little seaport of San Francisco developed into the great commercial metropolis of the Pacific Coast, and as a consequence, its resident population was forced into outlying districts. The churches naturally had to move along. Thus Our Savior's Church assumed more and more the character of a regular city church serving resident members. Yet Our Savior's Church never ceased to work for the good of our seamen.

The year of 1890, however, may be designated as the time when our Seamen's Mission of San Francisco began to assume a concrete form as a distinct church activity, apart from the local congregation. Rev. O. Groensberg, the pastor of Our Savior's Church, saw that something had to be done in the matter of establishing a headquarters for our sailors. An opportune circumstance presented itself, when in the year of 1890 our Finnish Lutheran brethren started a Seamen's Mission on the San Francisco city front. Rev. Matte Tarkkanen was superintendent and pastor. Our sailors were accorded the privilege of using this meeting place as their headquarters. Every Wednesday evening Rev. Groensberg conducted a Bible reading service. All mail and all papers coming to our sailors were taken care of by the Finns. For this accommodation our Finnish friends received the nominal sum of only $5 a month, the Young People's Society of Our Savior's Church pledging itself to pay this amount. It is needless to say, that we owe our helpful Finnish brethren a great debt of gratitude. In this connection it may be of interest to note that Rev. Groensberg, in this initial effort, in behalf of the seamen, was assisted by A. H. Lange, a member of his church, who, ten years later, was destined to become our first regularly called Seamen's Missionary to San Francisco. This arrangement with the Finns lasted for several years, until they moved to other quarters. Our Savior's Church, however, continued its good work in behalf of the sailors and never flagged in interest until the regular work was started. In the proceedings of the general synod meeting, held at Spring Grove, Minn., in the summer of 1899, it appears that the attention of the synod was directed to the Seamen's Mission of San Francisco. On page 79 of said proceedings we find the following resolution:

''The Synod ratifies the action taken by the Church Council in the matter of appointing a seamen's missionary on the West Coast and recommends that he be stationed at San Francisco;

Further, Be it resolved, that an appropriation for the purpose be made according to the amount of means on hand.'' The acceptance of this resolution was the first synodical action taken in establishing a seamen's mission at San Francisco.

Now the next issue was to find a man for the place. Not until December 2, 1900, could an available man be found. Then Rev. A. H. Lange accepted the call as Seamen's Missionary, and shortly afterward he arrived in San Francisco; but his day of labor was not to be of long duration. October 17, 1901, he entered upon his eternal rest. He was given grace to make the beginning in establishing on a firm footing the Seamen's Mission of San Francisco. Rev. Lange will ever be remembered as the man chosen by the Lord to lay the foundation of this great and blessed work.

On January 7, 1902, his vacancy was filled by Rev. Lauritz Carlsen. Under the supervision of Rev. Carlsen the work of the mission, as to volume, assumed incredible dimensions. The good work begun by his predecessor was continued and most successfully prosecuted by Rev. Carlsen. Hardly any one could be better adapted for this kind of work than he. To the seamen he was as a father, and in turn he enjoyed their confidence. The daily number of visitors to the mission was astonishingly great. Carlsen's name became a household word among the sons of the briny deep in all parts of the world. A few facts anent the work of the mission during the first ten years of Rev. Carlsen's tenure of office may be interesting at this point of the narrative: More than $1,000,000 had passed through the hands of the missionary; more than 175,000 sailors had visited the mission; more than 80,000 letters had been received and mailed; more than 1,000 services had been conducted. Add to this the visitations to the sick at hospitals, the visits to ships in port, the distribution of thousands of pamphlets, tracts, papers and books, and it will convey some idea of the scope and the significance of the work done by Rev. Carlsen. Eternity alone, however, will furnish evidence of the real scope and significance of this man's work.

The mission had now assumed proportions as to make it impossible for one man to attend to it all in its many ramifications. On January 20, 1912, the synod appointed a committee to assist in the work of the mission. The Reverends O. Groensberg, P. Borup and E. M. Stensrud constituted the committee. In the fall of 1912 Rev. Carlsen began to ail. This ailment proved to be the beginning of the end. Temporarily his place was filled by T. C. Saetra, a member of the Church-Council of the synod. It being evident that Rev. Carlsen would never again fully recover, the Seamen's Committee at its semi-annual meeting, April 14-17, 1913, resolved to call Rev. Groensberg as his successor. In the event, however, that Rev. Carlsen should recover enough to be able to do a little work he was to assist in the mission. But it was not so to be. The mission was not to be blessed with his valuable services any more. May 14, 1913, he went home to God. Rev. E. S. Belgum, pastor of Trinity Lutheran Church, Oakland, was appointed to fill the vacancy in the board of the Seamen's Mission.

It was no easy matter, however, to step into the place of a man like Rev. Carlsen—and to fill it adequately. No one felt this responsibility more than Rev. Groensberg, whose duty it now was to close up the break in the ranks occasioned by the death of Rev. Carlsen. But how wonderfully the Lord disposes of matters in His Kingdom and how easily He solves difficult, yea, to us seemingly insurmountable, problems! None of us is so efficient, none of us so indispensable that the Lord can not spare us or accomplish His purpose without us; so in the matter of securing a man for the Seamen's Mission of San Francisco. We all felt that it would be exceedingly difficult to find a man capable of filling Rev. Carlsen's place, whose qualifications—natural talent and learning, world-wide and life-long experience—pre-eminently fitted him for the position, but as he stepped out, the Lord had another man ready to step in, and a man so well adapted for the position that he could take hold of the work and at once fill the place of a man even like that of his predecessor. And from the beginning the Lord has abundantly blessed Rev. Groensberg in this work. Was Rev. Carlsen psychologically fit to handle men of the sea-faring world? So is Rev. Groensberg. Was Rev. Carlsen able to take father's place with loving counsel and firmness? So is Rev. Groensberg. In brief, the seamen find in Groensberg a tender father, a faithful friend, an earnest teacher, but also, if need be, a stern master. To his boys he is the embodiment of law and love. Under his supervision the mission is ever increasing its usefulness and constantly gaining prestige in the church as well as in the industrial circles of this great metropolis. An institution annually handling so much money as does our Seamen's Mission will naturally be respected by the world of finance.

REV. O. GROENSBERG

Rev. Groensberg was born December 7, 1855, in Sogn, Norway. His parents were Nicolai and Martha Borge (mother born Ericksen). Emigrated to America in

1867. Graduated from Luther College in 1877, receiving the degree of A. B. In 1877 entered Concordia Seminary, St. Louis, Missouri, as theological student. In 1880 he became Candidate of Theology; same year ordained to the ministry on a call from Our Savior's Church, San Francisco, California. In 1895 he accepted the position as president of Pacific Lutheran Academy, Parkland, Wash. In the summer of 1897 was called as missionary for Central California. In 1900-1913 again pastor of Our Savior's Church, San Francisco. In 1898-1907 he was vice-president of the Pacific District of the Synod of the Norwegian Evangelical Lutheran Church of America. In the spring of 1913 was called as missionary to the Seamen's Mission of San Francisco.

REV. PAUL BORUP

Rev. Borup was born in Aarhus, Denmark, January 23, 1869. His parents were Eskild Borup and Mette Sine, née Jensen. He received his early education and Christian training in the schools and church of Denmark. Emigrated to America January, 1889, arriving in Halifax, Canada. Thence he moved to Montreal. In his youth he had learned the trade of cabinet-maker. This line of work he took up immediately upon his coming to this country. Though an expert at his trade, and as a consequence, never without a job, he did not feel satisfied with his vocation in life. In the early years of his childhood the thought of becoming a minister of the gospel had been implanted in his soul. Later circumstances of life, however, had well-nigh frustrated his youthful aspirations. Upon arriving in America and seeing the spiritual conditions round about him, the old love for gospel work was again revived and took complete possession of his being. He joined the local Scandinavian Lutheran congregation of Montreal and took an effectual hold of the work in the church. He found a special mission for doing so in the fact that the congregation had no resident pastor. During his six or seven years in Montreal he worked at his trade on week-days, filled the place as pastor and superintendent of the Sunday-school on Sabbath, and studied theology and Hebrew in the evenings, ever having in mind that the day would come for the realization of his hopes once to become a minister of the Gospel. Montreal is a great seaport, and trading vessels from all parts of the world visit the harbor. Sailors of Scandinavian birth naturally form a great part of the sea-faring population of that city. The young man Borup saw his duty. And his work for the sailors of Montreal is well known in our synod and has received due recognition. During his stay in Montreal and through his work in connection with the church he became acquainted with the Synod of the Norwegian Evangelical Lutheran Church of America. In the fall of 1895 he was admitted as a student of theology at Luther Seminary. In June, 1898, he graduated from this institution and became a Candidate of Theology. On a call from Trinity Norwegian-Danish Evangelical Lutheran Church, Omaha, Nebraska, he was ordained to the ministry. In the spring of 1899 he accepted a call from the Norwegian-Danish Evangelical Lutheran Church of Eureka, California. In the summer of 1902 he accepted a call from the Danish Evangelical Lutheran Church of Suisun, California, with the understanding that his congregation at Eureka was to be served from Suisun. During his pastorate in Eureka he also organized a Danish Lutheran congregation in Arcata, California. In the capacity of field missionary, he has served the missions at El Paso de Robles and San Luis Obispo in Southern California. But his former congregation in Humboldt County reissued a call for him as their resident pastor, and in January, 1905, Rev. Borup returned to Humboldt. Rev. Borup is president of the Special California Conference, being elected to this office in 1913. He is also president of the committee of the Scandinavian Lutheran Seamen's Mission of San Francisco, to which position he was elected in the spring of 1913. Rev. Borup is a warm friend of our English missionary work in the Lutheran Church of America. He firmly believes that our Lutheran Zion in this country will stand or fall with the English Lutheran Mission. In a particular sense he is a friend of Trinity Church of San Francisco and its pastor. And a happy coincidence, indeed, it is that Rev. Borup was the minister who preached the first sermon held in the ruins of Trinity after the great catastrophe of 1906.

REV. PAUL BORUP

The City Mission of San Francisco

WHAT is meant by the church activity called the City Mission? To quote from the president's report to the synodical meeting held at Minneapolis in 1913, we answer:

"This mission appeals to our hearts with ever-increasing force. Only ponder the reports of our city missionaries of New York, Chicago, Minneapolis, St. Paul and Seattle. These reports open to view the conditions obtaining at these places and all other populous centers of our country. The hospitals, the prisons, the poor-houses, the settlements of the less fortunate classes, the home-finding societies, the Martha-Maria homes, all of them separately and collectively, appeal to our city missionaries for help and comfort and sympathy." After referring to other large cities where we already have established city missions, the president, Dr. Stub, recommended that San Francisco be the next place for establishing a city mission. The reverend gentleman recommended for this position was R. U. Evjenth. In closing, the Doctor said: "Dear brethren, let us help our suffering fellow-men at the hospitals, prisons and poor-houses of San Francisco. With all the force I possess, I do appeal to you in this matter."

At a later session the committee on city missions recommended for adoption the following resolution: "The Synod establishes a city mission at San Francisco and vicinity, and extends a letter of call as missionary to the Rev. R. U. Evjenth." This was adopted and these official facts pertaining to the establishment of a city mission in San Francisco will also serve as an answer to the question, "What is meant by the city mission?"

The actual work of the city mission in San Francisco commenced, when Rev. Evjenth arrived in this city, July 1, 1913. A survey of the work of these first two years of its existence might be of interest to the reader. Of sick visits the missionary made 2,397; of visits to homes, 600; Bibles and tracts distributed, 12,000; Scandinavian books acquired for the library at San Quentin prison, 200; circulating library for the sick, 50; sermons delivered, 58; lectures, 18.

Rev. R. U. Evjenth was born at Udvig, Skjerstad, Salten, Norway, July 28, 1871. His parents' names were Koplin Ludvig Evjenth and Angellette Diora, née Green. He received his secular education in Norway. In 1899 he emigrated to America and took up the study of theology at the seminaries of Hauge's and the Norwegian Synods, Red Wing and St. Paul, Minnesota, respectively. He is the founder of Bethesda Mission in the city of Brooklyn, New York, where he continued as superintendent for four years. Then he served as pastor at Madison, Wisconsin, and Mt. Vernon, South Dakota. In 1913 he was called by the Norwegian Synod to take up the work of the city mission in San Francisco.

A Short History of Trinity Norwegian Lutheran Church of Oakland

By Rev. E. S. Belgum

THE sainted Rev. Lauritz Carlsen, a member of the Synod of the Norwegian Lutheran Church of America, while serving Our Savior's Church in San Francisco, commenced missionary work among the Scandinavians of Oakland in 1876. Before that time nothing had been done to gather the Scandinavian Lutherans in that city into organized congregations, so he organized Our Savior's Church of Oakland. It was, however, dissolved a few years later. In 1879 Rev. Carlsen accepted a call as missionary to Australia and Rev. I. L. P. Dietrichsen, now of Jersey City, New Jersey, became his successor in Oakland.

During his pastorate of eighteen years Rev. Dietrichsen was also the field missionary for Central California. In 1897 Rev. Dietrichsen accepted a call to Jersey City and was succeeded by Rev. O. Groensberg, now seamen's missionary in San Francisco. In 1899 Rev. Groensberg accepted a call to his former charge in San Francisco. Oakland was then served by pastors from San Francisco until 1903, when Rev. P. N. M. Carlsen was called by the Mission Board of the Synod to take up the work in Oakland and Hayward. A year later he organized Our Savior's Danish-Norwegian Lutheran Church.

TRINITY NORWEGIAN LUTHERAN CHURCH

During Rev. Carlsen's pastorate a lot was purchased in Athens Avenue. A church building was bought from the Swedish Baptist congregation and moved onto the premises in January, 1905. The church was remodeled, papered, painted and a tower built. And it was used for divine services for the first time Easter Sunday, 1905. The church was dedicated May 7, 1905, by Rev. J. Johansen of Fresno, California.

In the spring of 1906 the congregation was dissolved after Rev. Carlsen had resigned as pastor. Trinity Lutheran Church was then organized by Rt. Rev. L. C. Foss and it was so arranged that Trinity Church should retain the property in Athens Avenue. Rev. M. A. Christensen was called and served the congregation until the fall of 1910, when he accepted a call to Stanwood, Wash. During his pastorate a two-story building was erected; parsonage upstairs and guild halls downstairs, but shortly after being finished it was destroyed by fire. The pastor and congregation were not dismayed, but immediately entered upon the task of erecting a new parsonage, which was completed the same year.

Rev. E. S. Belgum was then called and was installed by Rev. L. Carlsen on March 26, 1911. Among the improvements during his pastorate might be mentioned the building of church parlors, the purchase of a new organ and piano. The congregation is not large but is growing substantially from year to year. It has been self-supporting since March, 1911. The present church officers are as follows: President, the Pastor; secretary, C. P. Guldberg; treasurer, M. N. Lund; trustees, M. B. Pederson, H. M. Andersen, J. Folwick.

JOHANNES KRINGLEN

Mr. Kringlen was born at Eker's "Prestegjeld," Norway, 1870. His parents were Isak Johannesen Kringlen and Hansine Bergesen (née Osterboe). He was educated in the schools of the fatherland, and is the oldest of ten children. In 1889 he emigrated to America. In Norway he learned the trade of cabinet-maker, which he followed for ten years. Then he entered into the business of general house building and contracting. In 1906 he decided to leave the Eastern States and go to California.

In his childhood and youth Mr. Kringlen received a good Christian training. The principles then instilled into the young soul became the anchor of his life and guide in all his undertakings. Mr. Kringlen has always been a loyal churchman. The work of the church has ever stood before him as the highest duty in a person's life—a duty embracing "the one thing needful" for time and eternity. Upon his arrival in America he sought the church of his fathers, finding it well established in the East, where he first settled. Coming to California he found church conditions different from what they were in the Middle West. The work of the church was comparatively new, and hence the congregations weak and struggling. This, however, proved to be Mr. Kringlen's opportunity, and his services in the cause of the church, particularly in the bay cities, deserves special mention.

Our Norwegian Lutheran Church at Oakland was just going through a period of severe trial at the time of Mr. Kringlen's arrival. The congregation had no regular pastor and the prospects for getting one were very poor. No funds, and—worst of all—so very few seemed to take interest in the work. Hardly any one dared to hope for ultimate success in establishing a Norwegian Lutheran Church in Oakland. An embarrassing circumstance, too, added to all the rest, was a big debt resting upon the church property. Such are trying times for a congregation—ordeals that severely test the faithfulness of the members—but thanks be to God, who always leads it so, that those who love and serve Him are never put to shame. He raises up men and women and gives them courage equal to the occasion—men and women who willingly take a hold of the work and, by His grace, carry it to success. One of the good people who came to the rescue of Trinity Lutheran Church of Oakland was Mr. Kringlen. He encouraged the despondent members, exhorting them to be steadfast until the Lord's time had come for sending a man. Such a man came in the person of the present pastor, Rev. E. S. Belgum, under whose very efficient leadership the church has been greatly blessed. Now it is a self-supporting congregation, comprising a goodly number of members and affiliates, together with an unlimited field for growth and influence. Gratifying results, indeed, especially to those who have borne the burden and the heat of the day.

JOHANNES KRINGLEN

Mr. Kringlen is a genuine American, admiring all American institutions, yet he has not forgotten the "land of the midnight sun," the land of the almost countless fjords, rugged coastline and snow-capped mountains—old Norway. Everything Norwegian from language and literature to fish and herring, Kringlen loves and admires. He is an untiring worker in every cause reflecting honor on the fatherland. He realizes the value of the heritage of our fathers, and no one understands it better than Kringlen, what an asset this heritage is in the upbuilding of this great American nation. Therefore, he deems it our duty as Norwegian-Americans to let our fellow-citizens know who and what we are and what we have to offer as descendants of the Viking race.

Mr. Kringlen is a single man, residing in Thirteenth Avenue, Oakland.

Pastors and Churches of California in connection with the Synod of the Norwegian Evangelical Lutheran Church in the United States.

Pastors: E. S. Belgum, Oakland; P. Borup, Eureka; R. U. Evjenth, San Francisco; O. Groensberg, San Francisco; J. Johansen, Fresno; N. Pedersen, Santa Barbara; O. J. H. Preus, Los Angeles; E. M. Stensrud, San Francisco; H. M. Tjernagel, Santa Barbara; Jos. H. Berg, Oakland; Carl Foss, San Francisco; J. W. Johnshoy, San Francisco.

Churches: Our Savior's, San Francisco; Trinity, San Francisco (English); Grace, San Francisco (English); St. Paul's, Oakland (English); Trinity, Oakland; Fruitvale Mission, Oakland; City Mission, San Francisco;

Seamen's Mission, San Francisco; Mission, Suisun; Mission, Richmond; Norwegian-Danish, Eureka; Danish Evangelical, Arcata; Our Savior's, Fresno; Our Savior's, Los Angeles; Pasadena Mission, Los Angeles; Scandinavian Evangelical, Santa Barbara; First Evangelical, Hemet; Mission, Moorpark.

Pastors and Churches of California in connection with the United Norwegian Lutheran Church in the United States.

Pastors: Sigurd T. Soerensen, Los Angeles; G. Shurson, Patterson; N. Askeland, Orland; Karl Strömme, San Francisco; J. H. Brönö, Alameda.

Churches: Bethlehem, Los Angeles; Mission, Pasadena; Mission, San Diego; Our Savior's, Patterson; Mission, Tokay Colony; Mission, Stockton; Mission, Happy Valley, Olinda; Mission, Orland; Bethlehem, San Francisco; Mission, Alameda; Mission, San Pedro.

Pastors and Churches of California in connection with Hauge's Norwegian Evangelical Lutheran Synod in the United States.

Pastors: Th. Himle, Santa Rosa; J. E. Tollefsen, Santa Rosa.

Churches: Bethlehem, Santa Rosa.

Slavonian Lutherans in California.

Itinerant Missionary, Rev. A. L. Ramen, Allentown, Pennsylvania.

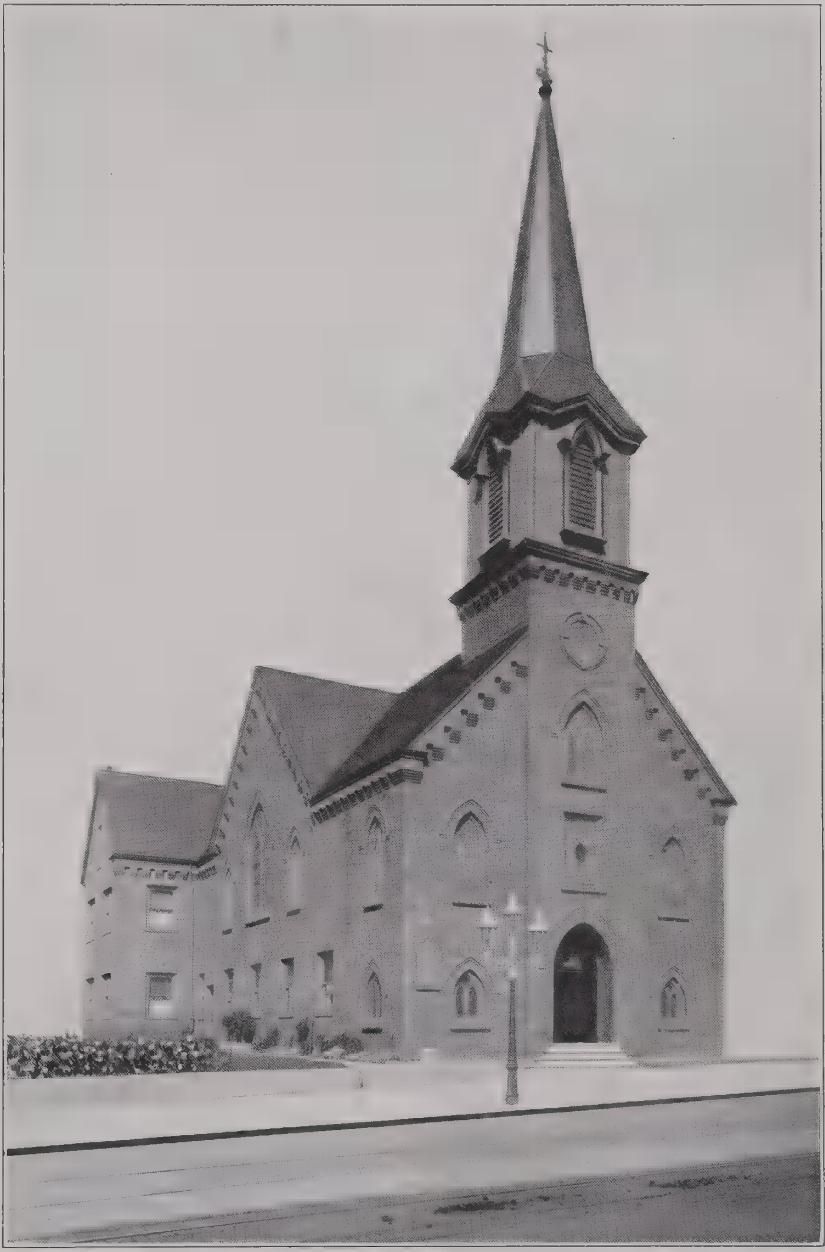
Missions at San Francisco, Oakland, San Jose and Los Angeles.

St. Ansgar Danish Evangelical Lutheran Church of San Francisco

REV. ANDERS H. JENSEN

REV. JENSEN was born in Strib, Denmark, October 15, 1868. Received his early education in the public schools of his native town. From 1885 to 1888 attended the State Normal at Skaarup. From 1888 to 1890 received private academic instruction. Taught school for one year. In January, 1891, he emigrated to the United States. After a course in language study, entered the theological seminary of the Synod of the Norwegian Evangelical Lutheran Church in America. In 1897 became candidate of theology. In January, 1898, was ordained as minister of the gospel, Rev. O. Groensberg officiating. The ordination took place at Our Savior's Scandinavian Evangelical Lutheran Church, San

REV. ANDERS H. JENSEN



ST. ANSGAR DANISH EVANGELICAL LUTHERAN CHURCH

Francisco. He had accepted a letter of call from the Norwegian-Danish Evangelical Lutheran Church, Eureka, California. Served this congregation as pastor for two years, and at the same time doing missionary work in other Scandinavian communities of Humboldt County. In 1900 he joined the United Danish Lutheran Church of America, feeling that he could do more for his countrymen by devoting his entire time to purely Danish church work. The Danish Lutheran mission at Ferndale, served from Eureka by Pastor Jensen, now assumed definite form by organizing the Danish Lutheran Church of Ferndale, and calling Rev. Jensen as pastor. This congregation he served from 1899 to 1911, when he accepted a call from the St. Ansgar Danish Evangelical Lutheran Church of San Francisco. In 1909 the United Danish Lutheran Synod elected him to the presidency of its theological seminary, Blair, Nebraska, and offered him the chair of Dogmatics and Church History of said institution, but on account of poor health he was compelled to decline the offer. In 1904 was elected president of the Pacific Coast District of the United Danish Lutheran Church of America.

St. Ansgar Danish Evangelical Lutheran Church was organized, 1903, by Rev. P. L. C. Hansen, its first pastor. Served by him until 1911. Rev. A. H. Jensen was called and has served the congregation since then. The church edifice was erected in 1905-6. The well-known James Madison, Hans Ravn, Halvor Jacobsen and J. C. Hansen were among the first officers.

Pastors and Churches of California in connection with the United Danish Evangelical Lutheran Church in the United States.

Pastors: A. H. Jensen, San Francisco; O. Rye Olsen, Oakland; Christ Pilegaard, Oleander; A. P. Hansen, Caruthers; Carl M. Hansen, Selma; N. Hansen, Los Angeles; L. Johnsen, Los Angeles; S. Johnsen, Fresno; N. P. Nielsen, Ferndale; N. S. Nielsen, Reedley; E. S. Rosenberg, Fresno; P. J. Ostergaard, Palms.

Churches: Ansgar, San Francisco; Our Savior's, Oakland; Mission, San Jose; Our Savior's, Ferndale; Emmanuel's, Easton and Oleander; Pella, Selma; Pella, Del Rey; Ebenezer, Reedley; Bethesda, Fresno; Bethel, Los Angeles; Mission, San Diego.

Pastors and Churches of California in connection with the Danish Evangelical Lutheran Church in the United States.

Pastors: F. Mailand, Salinas; N. P. Pedersen, Parlier; H. Juhl, Oleander; J. M. Gregersen, Solvang; B. Nordentoft, Solvang.

Churches: Danish, Salinas; Danish, Chualar; Danish, Watsonville; St. Ansgar, Parlier; St. Johannes', Easton; Emmanuel's, Los Angeles; Bethany, Solvang.

The Swedish Evangelical Lutheran Ebenezer Church of San Francisco

THE congregation was organized August 10, 1882, by Rev. John Telleen, with a total membership of forty-eight souls. In March, 1890, the first church building was erected in Mission Street, between Eighth and Ninth. The Rev. C. S. Esbjorn, D. D., succeeded Rev. Telleen and served the church until 1894. In 1895 Dr. E. Nelander became pastor of Ebenezer Church. In August, 1898, he was succeeded by Rev. C. J. E. Haterius. During his pastorate the old church in Mission Street was sold and a magnificent church and parsonage, at a cost of $40,000, were erected at the corner of Fifteenth and Dolores streets. In 1905 Dr. Phillip Andreen became pastor of the church and served it until November 1, 1914. Since then the congregation has been temporarily served by Rev. M. A. Nordström. Rev. C. O. Lundquist of Minneapolis, Minnesota, has

SWEDISH EVANGELICAL LUTHERAN EBENEZER CHURCH accepted a call and will shortly take up the work as permanent pastor of Ebenezer Church.

Pastors and Churches of California in connection with the Swedish Lutheran Agustana Synod in the United States.

Pastors: A. M. Le Veau, San Jose; A. Kinell, Berkeley; M. A. Nordström, San Francisco; N. P. Anseen, Oakland; L. N. Dahlsten, Pasadena; P. E. Berg, Templeton; B. O. Berg, Kerman; W. X. Magnuson, Turlock and Berea; S. F. Johnston, Los Angeles; M. A. Odell, Kingsburg; C. O. Hemborg, Riverside; C. E. Anderson, Escalon; C. O. Lundquist, San Francisco; E. J. Colberg, Kingsburg.

Churches: Ebenezer, San Francisco; Immanuel, San Jose; St. Paul's, Oakland; Bethel, Templeton; Eureka, Eureka; Emmanuel, San Francisco; Bethany, Berkeley; Concordia, Kingsburg; First Swedish Lutheran, Fresno; Bethany, Kerman; Berea, Turlock; Nazareth, Turlock; Sharon, Escalon; Angelica, Los Angeles; Eden, Riverside; Trinity, Pasadena.

Pastors and Churches of California in connection with the Finnish Lutheran Missionary Society of Finland.

Pastors: A. V. Halla, San Francisco; Otto Kaarto, Fort Bragg.

Churches: First Finnish, San Francisco; Finnish, Berkeley; Finnish, Rocklin; Finnish, Reedley; Finnish, Fort Bragg; Finnish, Eureka; Finnish Seamen's Mission, San Francisco.

St. Paul's German Evangelical Lutheran Church of San Francisco

ST. PAUL'S Church was organized May 17, 1867. At first services were held at Congress Hall, Bush Street, and later at Dashaway Hall in Post Street, beween Kearny and Dupont. The growth of St. Paul's was rapid under the efficient leadership of Rt. Rev. J. M. Buehler, who organized the congregation. After conducting services in public halls for about three years the congregation secured a church home by the purchase of the Presbyterian Church in Mission Street, between Fifth and Sixth, in the sum of $24,000. On the first Sunday in Advent, 1869, the congregation took possession of its new place of worship.

St. Paul's enjoys the distinction of being the mother church of all the Lutheran churches on the Pacific Coast. In the seal of this congregation is found an emblem of the open Bible. This is significant. It points to the object of the organization, a holy determination to preach the Bible, the whole Bible and nothing but the Bible. And by the grace of God St. Paul's Church has been true to this original purpose. In that church the Bible has not been suffered to lie on the speaker's desk only for a show. There the whole counsel of God unto salvation did ever sound in its truth and purity. From its earliest inception this church has been the fountain head of true Lutheranism on the Pacific Coast. In the course of years, therefore, numerous daughter congregations of the same type have sprung up round about this mother church. St. Paul's Church has experienced the truth of the promise of God, that His word shall not return void but prosper in the thing whereto it was sent.

In all its work, this congregation has shown the true missionary spirit. It was not satisfied with keeping the priceless treasure of God's word to itself or among its own people, the Germans. It also ministered to the spiritual wants of our Scandinavian brethren of the bay cities community, who for many years were without a church of their own and left to themselves like sheep without a shepherd. It was through the solicitous efforts of St. Paul's German Lutheran Church that our Synod was brought to see the imperative duty of at once sending a missionary out here who could serve our countrymen in their own language. The coming of this missionary in the person of Rev. Chr. N. Hvistendahl marks the beginning of the missionary activities among the Scandinavian people on the Pacific Coast. Truly, therefore, St. Paul's has merited the honor of being called "the mother church of the Lutherans on the Pacific Coast."

ST. PAUL'S GERMAN EVANGELICAL LUTHERAN CHURCH

In its day of labor St. Paul's Church has had many severe trials. More especially may this be said of the missionary efforts previous to and leading up to its organization. Open enmity against the word of God had resulted in nullifying the first attempts at establishing on scriptural basis a Lutheran church in this city. Many of those who became charter-members of St. Paul's

Church, together with the pastor, were compelled to sever their connection with brethren assuming an unchristian attitude in the work of the church. But after the years of trial came years of peace coupled with a remarkable growth of the church-work representing true Lutheranism in our city. In the course of time the new congregation had outgrown its accommodation in Mission Street. A wise casting about for another location was undertaken. In the year 1890 a large corner lot in Eddy and Gough streets was secured in the sum of $35,000. In May, two years later, the congregation celebrated its twenty-fifth jubilee, and as an evidence of the strength and spirit of self-sacrifice on the part of the members of St. Paul's may be mentioned the notable fact that a thank-offering was taken up in the sum of $21,000. This was the beginning of the church-building fund. On September 7, 1892, the erection of the new church edifice was commenced, and the corner-stone laid October 30 of the same year. On February 11, 1894, St. Paul's Church was dedicated, with Rt. Rev. Buehler officiating and thousands and thousands participating in the festivities. The new St. Paul's Church is one of the largest and most beautiful edifices owned by any congregation in this city. It was erected at a cost of $85,000, the Gothic style of architecture being used.

RT. REV. J. M. BUEHLER

The sainted Pastor Buehler was born August 8, 1837, at Baltimore, Maryland. His parents' names were Franz Buehler and Charlotte, born Bauer. Buehler was the fifth in a family of fourteen children. His father was one of the captains of industry in the city of Baltimore, where his brothers today are at the head of the extensive manufacturing enterprise established by their father in a suburb of Baltimore called "Buehlerville." One of his brothers, William Buehler, is a prominent naval officer and member of the American diplomatic embassy to Berlin.

Young Buehler received his early education in the public schools of Baltimore. In the year 1851 his father sent him to St. Louis where he graduated from Concordia College and Concordia Theological Seminary, obtaining the degrees of A.B. and D.B., respectively. In the meanwhile there had come an urgent call requesting the governing body of the German Missouri Synod to send a missionary to distant California. Young Buehler was selected as the one best adapted for this position and the letter of call was extended to him, which he also accepted.

On August 1, 1860, the young missionary started on his long journey to California and on August 25 he arrived at San Francisco, a stranger in a strange city, with no one to meet him and hardly a dollar in his pocket—a thief on board the ship had relieved him of well-nigh all his cash. Meyers Hotel, 206 Montgomery Street, became the first home of our first Lutheran missionary on the Pacific Coast. On the following Sunday, September 2, 1860, Rt. Rev. Buehler delivered his first message, at a church in Green Street, to an audience of twenty-eight hearers. On November 8, 1860, the German Evangelical Lutheran Congregation of San Francisco, California, was organized and Buehler called as its pastor. October 28, 1863, the corner-stone of the new church was laid. The congregation had secured a church-site in Geary Street and gathered a considerable sum of money for the church-building fund. The basement of the future edifice was built and furnished, where the congregation conducted its services for about three years. The time had arrived for the completion of the building. The membership had increased very creditably. Externally the congregation was now in a flourishing condition. But true is the word, "Where God builds His house, Satan also erects a chapel." Now ensued the greatest trial in Pastor Buehler's life. And none but a man standing firmly upon the word of God and possessing a will and determination of iron and steel could have stood the test. It was at this time that Pastor Buehler and a few faithful members, for conscience sake, had to sever their connection with the members of the first Lutheran church organization of this city.

On September 14, 1862, Pastor Buehler was married to the eldest daughter, Louise, of the Rt. Rev. F.

J M Buehler

Wyneken of St. Louis. This singularly gifted and amiable Christian woman became a true helpmeet to her husband, cheerfully sharing with him all sorrows and joys and together with him establishing an exemplary Christian pastor's home. On the occasion of Buehler's funeral the beautiful home-life of the Buehler family was referred to in the following words: "In that hospitable home, where we always found such cordial welcome, a spirit prevailed which was altogether lovely, so much so that we considered it a privilege to enter this home. There a kind and loving wife was truly a helpmeet to that tender husband, the children could not but be devoted to that loving father and do all in their power to make his life happy. There the members of his congregation, ever zealous for the welfare of their beloved pastor, surrounded him with all the necessities and many of the luxuries of this life. There relatives, fellow-workers in the vineyard of the Lord, and kind friends in great numbers, vied with each other in rendering kind offices to that noble friend, brother and counselor. Ah, his was a home never to be forgotten!"

Characterizing Pastor Buehler as a Christian gentleman, the speaker said: "With him his faith was not only a matter of profession but also of the heart; not only was his life thoroughly upright in every respect as far as this can be said of imperfect man in this world, but Christian love—a love not restricted to one's family or immediate friends but of far greater scope, embracing all who were in any way in need of help, spiritual or temporal—that criterion of true faith was really the dominating factor in his life. This is not only our individual opinion of the man but the opinion held in general throughout our community and country. An editorial on his death," he continued, "read by most of you, in one of our morning papers, may be cited to substantiate this assertion: 'With profound sorrow the people of San Francisco, and many throughout the entire country, learn of the death of the Rt. Rev. Jacob M. Buehler, pastor of St. Paul's Lutheran Church in this city. It is not among Lutherans only that his services were useful and uplifting. His fine life has an influence wider than his parish or the circle of those who embrace his creed. In the moral order of this world a good man's life has issues far beyond the reach of his personal acquaintance. The emanations of a noble nature reflected from mind to mind and soul to soul broaden out through all the processes of human intercourse and affect the hearts and the conduct of thousands who may never have met or even heard of the individual from whom they emanate. Mr. Buehler was one of those strong natures that constitute an elementary force in society and help to hold the social organism together by spiritual bonds—invisible, but irrefrangible, not to be broken by force or worn away by time!'"

Pastor Buehler died August 28, 1901. The teeming thousands, irrespective of creed or nationality, paid their respect to the memory of this noble man by participating in the solemn obsequies.

Rt. Rev. G. A. Bernthal succeeded Pastor Buehler to the pastorate of St. Paul's. Pastor Bernthal was born July 9, 1861, at Frankenmuth, Michigan, and was educated at Fort Wayne, Indiana, receiving the degree of A. B. in 1881. The same year he entered upon his theological studies at the Concordia Seminary, St. Louis, and in 1884 receiving the degree of D. B. His former charge was at Detroit, Michigan. Pastor Bernthal also succeeded his predecessor as president of the California and Nevada District of the German Missouri Synod.

Pastors and Churches of California in connection with the German Missouri Synod of the Lutheran Church in the United States.

Pastors: G. A. Bernthal, San Francisco; Arthur Brohm, San Francisco; M. Liebe, San Francisco; Theo. Pieper, San Francisco; J. H. Theiss, Oakland; H. Haserodt, Oakland; F. Schlottmann, Oakland; N. F. Jensen, Los Angeles; C. F. Bauer, Alameda; B. Lange, Berkeley; C. P. Block, San Jose; G. Jacobsen, Stockton; W. Grunow, Modesto; H. Wiemken, Lodi; A. H. Jakobs, Thalheim; W. Theiss, Petaluma; A. Berner, Santa Rosa; S. Hoernicke, Napa; O. Weinrich, Vallejo; W. E. Mathwig, Cordelia; Walter Bezold, Ferndale; E. Hieber, Jr., Chicago Park; G. A. Kirchner, Creston; H. Thiede, Fresno; G. Denninger, Selma; Theo. Schoessow, Visalia; L. Kueffner, Bakersfield; W. Loretz, Terra Bella; H. von Renner, Germantown; Bruno Saager, Marysville; A. Michel, Los Angeles; J. W. Theiss, Los Angeles; M. H. Tietjen, Los Angeles; H. Smukal, Los Angeles; E. T. Coyner, Los Angeles; J. Kogler, Orange; H. G. Schmelzer, Anaheim; E. Rudnick, Santa Ana; G. Mieger, Olive; H. O. Michel, Covina; A. Hansen, Pasadena; W. J. Lankow, San Bernardino; L. Achenbach, Banning; F. Haeuser, Whittier; W. F. Troeger, Redondo Beach; A. M. Wyneken, Long Beach; P. Scharf, San Diego; C. Damschroeder, San Diego; O. S. Zimmermann, Oxnard; D. Lebahn, Santa Barbara.

Churches: St. Paul's, San Francisco; St. John's, San Francisco; Zion, San Francisco; Excelsior Mission; San Francisco; Christ, San Francisco; Zion, Oakland; Trinity, Oakland; St. Peter's Mission, Oakland; Deaf and Dumb Mission, Los Angeles; Mission, Hayward; Immanuel's, Alameda; Bethlehem, Berkeley; Mission, Richmond; Immanuel, San Jose; Zion, Stockton; Mission, Sacramento; Mission, Modesto; Mission, Tracy; St. Peter's, Lodi; St. John's, Thalheim; St. John's, Petaluma; St. Luke's, Santa Rosa; Mission, Healdsburg; Mission, Laughlin; St. James, Newman; St. John's, Napa; Mission, Vallejo; Trinity, Cordelia; St. Paul's, Woodland; Mission, Vacaville; St. Mark's, Ferndale; Holy Cross, Eureka; Mission, Chicago Park; Bethlehem, Creston; Mission, Paso Robles; Zion, San Luis Obispo; Mission, Niles; Immanuel, Fresno; Mission, Kerman; St. Paul's, Selma; Grace, Visalia; Mission, Dinuba; Mission, Bakersfield; Zion, Terra Bella; Mission, Coalinga; St. Paul's, Germantown; Mission, Clark's Valley; Mission, Arbuckle; Mission, Marysville; Mission, Chico; Christ, Los Molinos; Mission, Red Bluff; Hollywood Evangelical Lutheran, Los Angeles; Trinity, Los Angeles; Christ, South Los Angeles; Immanuel, Los Angeles; St. John's, Los Angeles; Grace, Los Angeles; Immanuel English

Lutheran, Los Angeles; St. John's, Orange; Zion, Anaheim; Trinity, Santa Ana; Mission, Olive; Mission, Upland; St. Paul's, Pasadena; St. John's, Covina; Trinity, San Bernardino; Mission, Banning; Mission, Riverside; Trinity, Whittier; Mission, Gardena; Mission, Redondo Beach; Mission, Santa Monica; Zion, Long Beach; Trinity, San Diego; St. John's, Otay Mesa; Mission, Olivenhain; Mission, Escondido; St. John's, Oxnard; Mission, Santa Barbara.

Pastors and Churches of California in connection with the General Synod of the Lutheran Church in the United States.

Pastors: Winfield S. Hopkinson, Sc. D., D. D., Montara; Charles F. Oehler, D. D., Sacramento; Herman Gehrcke, San Francisco; Adolph Jatho, Oakland; L. C. Routzahn, Arroyo Grande; William Brandes, Oakland; George H. Hillerman, San Diego; John Edward Hoick, San Jose; Herbert J. Weaver, D. D., Los Angeles; William E. Crouser, D. D., San Jose; Oscar A. Gruver, Oakland; Henry S. Feix, San Francisco; John Gutleben, Oakland; William J. Roehmer, Fresno; Julius W. Romich, San Bernardino; James J. Chambers, Alpaugh; Jesse W. Ball, Ph. D., Los Angeles; William R. Swickard, San Francisco; Daniel J. Snyder, Long Beach; Michael F. Rinker; R. Warren Mottern, Riverside; C. Funk, Sacramento; Norman N. Harter, Salinas; Henry Wiemken, Los Molinos; George Philip Goll, Santa Barbara; William H. Derr, Pasadena; John R. Bracuer, Ph. D., San Francisco; William C. Eckhart, San Diego; Arthur E. Isham, Redlands; Herman H. Rippe, Fresno; Christian A. Walton, Winters; August Bahr, Sanger; Silas W. Young, San Jose; Waldemar Morenz Oeser, Campbell; Carl Legler, Fresno; Gustaf A. Hiden, San Francisco; Emil G. Lund, D. D., Oakland; Elmer H. Combs, Alpaugh; Gottfried Wenning, Glendale.

Churches: Christ, Alameda; First, Alpaugh; Wartburg, Fresno; St. Paul's, Fresno; First, Glendale; Trinity, Long Beach; First, Los Angeles; St. Mark's, Los Angeles; St. Paul's, Los Angeles; First, Oakland; Trinity, Pasadena; Grace, Phoenix; First, Redlands; Trinity, Riverside; First, Sacramento; German, Sacramento; Our Savior's, Salinas; First, San Bernardino; First, San Diego; First, San Francisco; St. Andrew's, San Francisco; St. Luke's, San Francisco; St. Matthew's, San Francisco; St. Paul's, Sanger; Grace, San Jose; Grace, Santa Barbara.

A Few Facts About the Austin Organ

BUILT AT HARTFORD, CONN.

Pacific Coast Distributors are R. T. Tilton, care The Wiley B. Allen Co., Kearny Street, San Francisco

IN BUYING an organ it is a great temptation to accept the largest offer or the lowest bid on given specifications. This is often done conscientiously, many thinking that all organs of a given specification are alike, and that more value is received for funds appropriated for the purpose. This is a very serious mistake; organs of the same specifications are no more alike than are churches that have an equal number of windows, pews and doors.

The Universal Air Chest is the fundamental feature of the Austin Organ, as it provides *absolute and uniform pressure to each and every pipe under all conditions of use.* All pipes are fed directly and individually from this Universal Air Chest. It can be entered at will by means of air-tight doors, even when the organ is being played, and when inside all parts of the action are exposed to view, and are readily accessible, an advantage that can not be too highly valued at the time of adjustment of parts out of order. Moreover, in the Universal Chest should any leak occur it can be stopped from the *pressure inside.* The Universal Chest system does not take up more space than other organs.

To produce tones of various strength and character, pipes must be made of varying materials, weight and scales. We cast the metal for and *make all pipes* used in the Austin Organ, the only organ company doing so in the United States.

Our Diapasons are made of special metal, which we have produced after experiments. All of our Diapasons are made of this metal and are exceedingly heavy. This extra weight of metal is much more expensive, but the tone quality fully compensates for the extra cost. The Diapason tone, which is the fundamental tone of the whole organ, must be full "ground tone" and free as possible from harmonics and nasal qualities, and this quality of tone with the power required can not be produced by a thin pipe. On the other hand, our "string stops," such as Viole d'Orchestre, Celeste, etc., are made of pure tin, exceedingly thin and light, because no body of tone is required, but the thin string quality must be brought out to the utmost. As we control every process of pipe manufacture we are able to meet exactly all requirements of whatever nature. We have introduced many new and special scales of pipes, based not only upon an accurate and comprehensive knowledge of English and Continental voicing but also upon our patient study and experiments.

We use stop keys instead of draw stops. The pneumatics are covered with the best leather and not with rubber cloth, which turns hard, cracks and causes leakage. The pipes run through to seventy-three notes, giving each manual a compass of six octaves.

THE WILEY B. ALLEN COMPANY

No mention of musical topics, to us, is complete without a brief reference to one of San Francisco's most prominent music dealers, The Wiley B. Allen Company, which house has stood for many years as representative of only that which is best and most straightforward in musical merchandising. For years past our Lutheran churches have been the happy recipients of every musical courtesy and favor at the hands of The Wiley B. Allen Company, that a business house could extend to its friends.

Main Outlines of the History of the Norwegian-Danish Evangelical Lutheran Church-Work in America

THE MUSKEGO CHURCH, BY REV. GUSTAV STEARNS

THIS is the story of how the first church built by Norwegians in America was erected. Previous to 1843 there was no Norwegian church edifice in this country. A few years before this a number of Norwegians had come to Milwaukee, crossing the Atlantic in a small sailboat and came to Milwaukee via the Great Lakes. They had intended going to Illinois, where there already were a few settlements of Norwegians who had come over a short time before. The city council in Milwaukee prevailed upon them to settle about twenty miles southwest of that city.

A short time after that, primitive dwellings were erected and religious services were conducted in the sod shanties, log cabins and dugouts of the sturdy pioneers. The first confirmation service was held in a barn of a farmer named Even Hegg. It was the largest building in the community. At that service the pioneers discussed the possibility of erecting a church.

The pastor, Rev. Claus Lauritz Claussen, a Dane, asked each man in the audience to arise and state how many logs he would donate for the building. After the pledges had been received a date was set for hauling the logs to the location of what was destined to be the first Norwegian church in America.

The site was on a hilltop about twenty-five miles southwest of Milwaukee. It was known as "Indian Hill." On this hill the Indians had worshiped their god, the great Manitou. Here they had conducted their religious rites and here they had buried their dead. Even after the church was erected the Indians came to the spot each fall for many years, in order to observe their religious rites. The Norwegian settlers were on friendly terms with the Indians and made no objection to a continuation of the custom.

On the day set for the bringing of the logs to this hill, the creaking of ox carts could be heard in all directions. The pioneers were fulfilling their pledges. The logs had been hewn with broadaxe by the members of the congregation. The trees were hard black walnut, but the men worked with a will. They would not be satisfied with building a church of untrimmed logs, so the timbers were made square. In addition to this they hewed grooves the entire length of the logs. Into these grooves they placed moss and between the logs they placed diamond-shaped pieces of timber in order that the walls might be airtight and waterproof. The ends of the logs were dovetailed so as to make the building solid.

The sturdy women in the community also took a hand. They made and laid the shingles for the roof. This work was superintended by Mrs. Haakonsen.

Before the church was completed a wealthy merchant, T. O. Bakke, Dammen, Norway, who had heard of the struggles and the piety of the Norwegian pioneers, sent a contribution of $400. The money was used to add a chancel to the primitive church.

Finally the great day of the consecration came; the broadaxes had done their work, the sturdy men and women had done their work—now these men consecrated and dedicated the results of their labor to the God of their fathers. For the first time since they came to America they were given an opportunity of assembling in a consecrated house in order that they might worship God according to the dictates of their conscience and the customs of their fathers.

It was only for a few short years, however, that happiness and good fortune smiled upon these men and women who had sacrificed so much. Five years later their faith in God was to undergo a test of fire. In 1848 came the time that men mention with a shudder—it was the year of the cholera. Men who arose in the morning filled with vigor and strength of early manhood, lay cold and silent in the sleep of death before the sun had set in the west.

There was no time to dig individual graves for those who died. Long trenches were dug. The beloved pastor of the congregation in that year, the venerable Hans Stub, would go through the woods and the swamps to make his pastoral calls. When he came to a home where he received no response after he rapped, he uncovered his head and stood silent before crossing the threshold. He knew what it meant. The Angel of Death had crossed that threshold before him.

The members of the family lay cold and silent in the home, but the good pastor did not flinch or fail to do his duty. He called upon others for assistance and the silent brethren were taken to the trenches near the church. When the service for the burial of the dead had been read, the faithful shepherd of the flock looked courageously to those who remained behind and told them not to lose their faith in God.

One-half of the congregation was buried in the trenches, but the faith of those who remained was not shaken. They continued to worship and they continued to pray and they continued to believe.

Then came a time when the patriotism of the men of the Norwegian community was tested—their patriotism not as Norwegians, but their patriotism as Americans. It was the opening of the Civil War.

From this settlement there arose the man who has been honored as the most patriotic Norwegian-American this country ever produced. When a painting representing the Norwegian-American patriots was to be hung in the capitol at St. Paul, the picture of this man, Hans Hegg, was selected. He was the son of the farmer, Even Hegg, in whose barn the first confirmation services were conducted.

Hans Hegg asked the governor of Wisconsin for permission to raise a regiment of volunteers among the Norsemen and their descendants. Permission was readily granted. The regiment was the Fifteenth Wisconsin, known as the Scandinavian regiment. The pastor of this first Norwegian Lutheran Church in America, Rev. Claus Lauritz Claussen, became the chaplain of the regiment. Hans Hegg was commissioned as colonel.

When the regiment passed through Chicago on its way to the southern battlefields, the Norwegians of Chicago presented it with a peculiar flag which was carried and defended. On one side of the flag was the Stars and Stripes; on the other the historic lion in the coat-of-arms of Norway.

This regiment gave a good account of itself in the four years of bloody struggle. In one of the first engagements in which it took part it captured a Confederate flag with this inscription, ''Hills' Cavalry, Victory or Death.'' It took part in many engagements. It never surrendered its flag. Its colonel and several of its officers were killed on the field of action.

The remains of Colonel Hegg were brought back from the battlefield to Wisconsin and buried on the historic hilltop, fifty feet from where the first Norwegian church in America was built.

When the war was over, 300 descendants of the Norsemen had given their lives to prove that the descendants of Norsemen in this country are patriotic, courageous American citizens. The flag was returned in triumph and is preserved at the present time by the organization of Norsemen in Chicago which presented it to the regiment at the beginning of the war. Last year this flag was on exhibition at the celebration of the centennial of the declaration of Norway's independence in Christiania.

The historic log church no longer remains on Indian Hill, twenty-five miles southwest of Milwaukee. Many years ago it was replaced by a beautiful brick structure, and in the place of worship the children and grandchildren of those early pioneers continue to worship.

Eleven years ago, the logs of the historic building were moved to the United Norwegian Lutheran Seminary, St. Anthony Park, between Minneapolis and St. Paul, where they were again put in place in the same positions they formerly occupied. This was done in order that the first Norwegian Lutheran Church in America might be placed within the shadow of one of the most beautiful buildings erected by the Norwegian church people of this country, the theological seminary of the United Norwegian Lutheran Church.

This plan was suggested by the first president of the church body, the late Rt. Rev. G. Hoyme, and a former pastor of Bethlehem Congregation, Minneapolis, Rev. Gerhard Rasmussen. These men were assisted in the plan by Rev. Otto Schmidt, at that time pastor at Muskego, Wis., where the church was located.

In order that the logs in the old church may be preserved for generations to come, an outer covering of boards has been placed over the logs, but upon entering the sacred edifice the original structure may be seen.

Hauge's Synod

By Prof. M. O. Wee

HAUGE'S Synod was organized April 13-14, 1846, on Jefferson Prairie, Rock County, Wisconsin, under the name of ''Den Evangelisk Lutherske Kirke i Amerika.'' A constitution was drafted and ratified, and in October, 1850, this constitution was somewhat enlarged. The idea was that this constitution should serve as such, not only for the Synod, but for the individual congregations as well. In 1874, however, the Synod decided to hold a special meeting of the pastors, at Minneapolis, Minn., beginning July 15, for the exclusive purpose of discussing the advisability of revising the constitution. A constitution for the local churches was also to be drafted. In June, the following year, the Synod declared in favor of the revision. This decision

BETHESDA OLD PEOPLE'S HOME, BERESFORD, S. D.

was again ratified by the Synod the following year, at a meeting held in Chicago. By this revision the name was changed to ''Hauge's Norwegian Evangelical Lutheran Synod of America.'' The constitution was again changed somewhat in 1912.

At the time of organization, the only ordained pastor was Elling Eielson, but a number of laymen took very active part in church work, some of them being proficient in preaching the Gospel of Christ. Several of these were ordained in the course of years. So we find in the '70s over twenty clergymen belonging to the Synod. The growth was not rapid but continuous. Great emphasis was laid on this, that each member of the church should be a confessing Christian. The tendency in respect to ceremonials was that of ''low churchly'' in nature. Pastors would wear no gowns. Chanting was excluded and the laying on of hands at public absolution was abolished. The right of laymen, unhindered to preach the word of God, was insisted upon.

SCHOOLS

The necessity of school training for pastors was, however, quite universally acknowledged. After having begun, but failed twice, to erect a theological seminary, the enterprise finally became permanent in 1879, when Red Wing Seminary, Red Wing, Minn., was founded. At first this school offered a preparatory and a theological course, each consisting of two years. But the school has been steadily growing, until it now offers four complete courses, an academy of four years, a college of four years, a business course of two years, and a theological course of three years. In addition to this it offers instruction in music. Besides Red Wing Seminary the Synod also owns and operates a co-educational college at Jewel, Iowa.

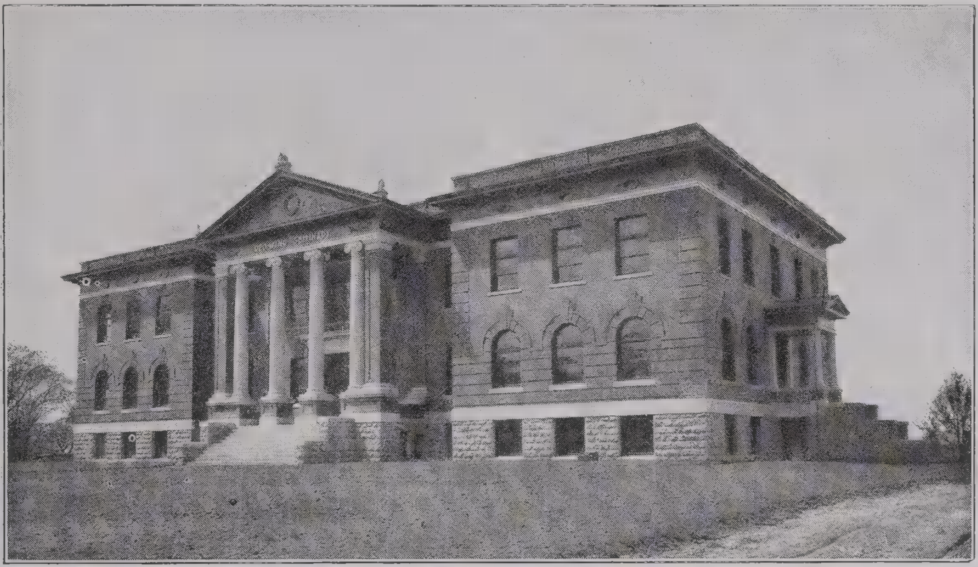
BETHESDA CHILDREN'S HOME, BERESFORD, S. D.

DORMITORY AND DINING HALL, RED WING, MINN.

JEWEL LUTHER COLLEGE, JEWEL, IOWA

In the year 1891 the Synod started a mission of its own in China. This work has been crowned with signal success. At present about twenty foreign and more than one hundred native workers are engaged in the Synod's work in this field. A high school, a hospital, and an orphanage have been established. Together with two other Lutheran Synods it also operates a theological seminary in China.

Inner-mission work has, from the very beginning, had a foremost place. More than thirty pastors, at present, are wholly or partly engaged in this work, and the number of laymen traveling about from place to place, bringing abroad the glad tidings of salvation through Christ Jesus, is not small.



RED WING SEMINARY, RED WING, MINN.

CHARITABLE INSTITUTIONS

Neither has the work of charity been neglected. At Beresford, South Dakota, the Synod has an orphanage and a home for the aged.

PUBLICATIONS

''Budbaeareren,'' a weekly paper, twenty-four pages, is the official church paper. ''Boernevennen'' and ''Children's Companion''—both weeklies—are the Sunday-school papers.

A young people's federation was formed in 1911. It is divided into seven district federations and includes nearly 150 young people's societies.

''The Mission Dove'' is an association consisting of pastors' wives and women missionaries. It was organized in 1901. The association has sustained a ''Bible School for Women'' in China, equipped the hospital at Red Wing Seminary and Jewel College, and erected a home for missionaries on leave of absence at St. Anthony Park, St. Paul, Minnesota.

At present the Synod has 169 pastors and professors, 364 congregations, and about 40,000 members. For running expenses about $70,000 a year is needed, while the Synod's property is valued at about $650,000.

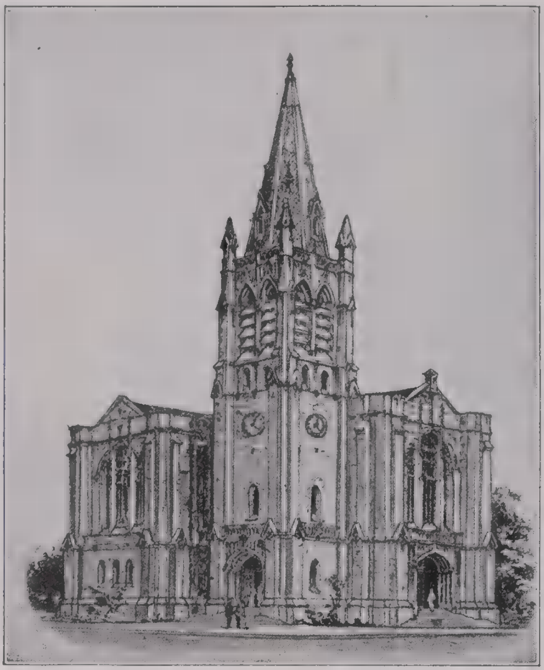
The Norwegian Synod

COMING events cast their shadows before them; past events cast their shadows behind them, and the events of the present, like trees under the noonday sun, cast their shadows around them, the radius of their influence determined by the spread of their branches. By this measure we may determine the importance of our subject. For, above everything else, the ''Synod'' is an ''event,'' a present factor and a very live, important factor in the shaping of the destinies of communities as well as individuals. Each of us as individual members of our church, and each congregation thereof, exerts as well as receives an influence, each according to ability and opportunity. But the real importance of the individual and the congregation and value and extent of such influence are realized, as one considers them, not by the standard of individual accomplishment, but as an active working part of a greater organization, where the collective influence of the great many individuals and congregations finds expression. And as the individual finds his greatest importance through a greater organization, so it is mete and proper, useful and beneficial, and interesting and necessary to the individual, to become acquainted with its history, its organization, its institutions, its activities, spirit and influence. And as we pass our eye over the area of shadows cast by the immediate branches of our church tree we find a present influence exerted by congregations of the church extending from sea to sea and from the Gulf into the Dominion on our north. But its radiant influence, exerted through its missionary activities, may be said to be almost worldwide. And as great oaks from little acorns grow, so also this great organization had its beginning in a small way, a pregnant acorn fallen in fruitful soil.

The Synod of the Norwegian Evangelical Lutheran Church of America, an evangelical church of the Lutheran faith, derives its qualifying name ''Norwegian'' from the fact that it had its beginning as a church organization among Norwegians, who had migrated to this Land of Promise from the Land of Fjelds and Fjords, and whose religious faith was expressed in the Confession of the Lutheran Church of Norway.

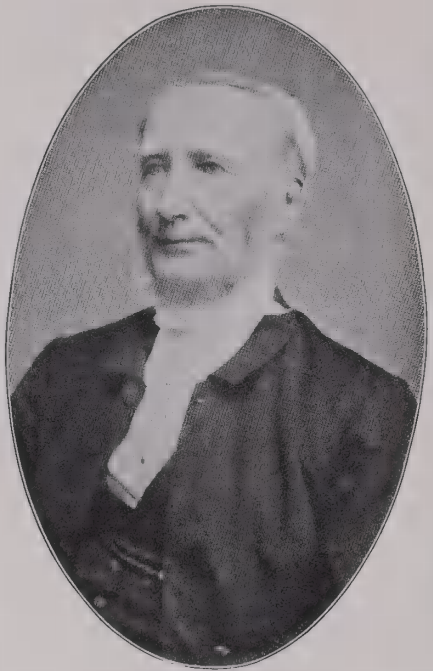
IMMIGRATION

The immigration of Norwegians to this country is traced back to one Kleng Pederson, credited with being the "Father of Norwegian Immigration." Pederson visited America in 1821, remaining for three years. He then returned to the Fatherland, and organized a colonization party of some fifty-two persons; they purchased a small ship, "*Restaurationen,*" and set forth in 1825 to become the pioneers of their people in the new world. This first colony bore fruit in a second party some ten years later. One of the original immigrants, Knud Slovigen, returned to Norway in 1835, and, by his efforts, a second party of 150 was organized and emigrated in 1836. In the following year, the first emigrant ship departed from Bergen. On board this ship was "Student" Ole Rynning. He died the following year. 1838, at Beaver Creek, Ill.; but not until he had written a glowing description of the beauties and promises of the new country, which was published in a little book in Christiania in 1838; and from then on the number of people emigrating increased steadily year by year. It is estimated that about 1,200 emigrated to America before 1840, 17,000 between the years 1840 and 1850, and 35,000 during the next decade. Most of these immigrants were faithful members of the church at home. And as good Christians they did not abandon their faith and their Fatherland. Recognizing the value and importance of collective efforts in the spiritual work of the church they at once began to organize congregations.



OUR SAVIOUR'S CHURCH, MINNEAPOLIS, MINN.*

The first Norwegian settlements to effect church organization were the Wisconsin settlements at Koshkonong, Muskego, and Rock Prairie. Muskego was the first to organize a congregation and receive the ministration of a pastor. In 1843 the congregation extended a call as pastor to C. L. Claussen, a Danish student, who had joined his fortunes with those of the new community. Having been duly examined and ordained October 18, 1843, by Rev. L. F. E. Crause of the German Lutheran Buffalo Synod, he at once assumed the duties as pastor to the congregation at Muskego. But the greater historical and personal interest centers about the congregation at Koshkonong. As these pioneers still felt themselves a part of the old homeland and church, it was of at least great sentimental interest that Koshkonong was the first to receive the ministrations of a pastor educated and ordained in the Fatherland and by the Mother Church. Furthermore Koshkonong became more than others a mother church for other congregations in the new country, not merely by reason of the greater missionary activity of its pastors, but because Koshkonong became the first haven of the greater number of immigrants, who, after a sojourn in which they imbibed the spirit of this colony, departed farther westward and there were instrumental in the formation of new congregations. But what gives to Koshkonong its greater luster is, that there was cradled the Norwegian Synod. Rock Prairie congregation was organized in 1844 by Rev. Diedrichson, Rev. C. L. Claussen becoming its first pastor, Rev. H. A. Stub coming from Norway in 1848 and taking charge of the church at Muskego. Each of these principal congregations gave the services of their pastors in part to the ministration of the other congregations, which had been organized in these several settlements; but which had been unable to secure the services of a resident pastor.



RT. REV. A. C. PREUS

FORMATION OF A CENTRAL ORGANIZATION

The need of active fellowship and united effort by the several parishes through a central organization made itself felt even at this early time, and in 1849 a first but fruitless effort was made at Koshkonong to perfect such an organization. In 1850 Rev. Diedrichson returned to Norway, but his loss was filled by the arrival of Rev. A. C. Preus at Koshkonong. Renewed efforts toward perfecting a central organization were made. By the zealous missionary activities of the pastors, there had already been organized and established twenty-three congregations. Nineteen of these sent representatives to a convention at Rock Prairie Church, January 4, 1851, and following days. This time a plan of organization was effected, a constitution was adopted, a church council elected, and Rev. C. L. Claussen was elected to the office of "Superintendent." In February, 1852, a second convention was held, this time at Muskego Church. Meanwhile the church had been strengthened by the arrival of three new pastors, Rev. H. A. Preus coming to Spring Prairie, Rev. G. F. Diedrichson to Rock Prairie, and Rev. N. Brandt to Rock River.

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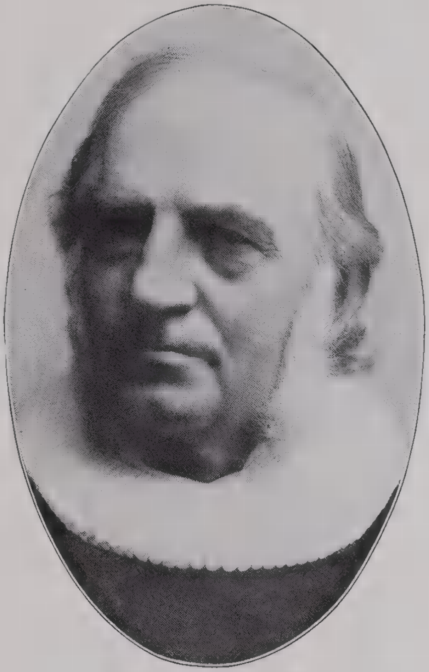
*Specimen of the many beautiful church edifices in the Norwegian Synod.

The constitution adopted at the first convention was now made the subject of further consideration and debate, and material amendments were found necessary and advisable. As this constitution by its provisions could not be altered or amended, the convention decided at its first meeting to dissolve the organization. Rev. Claussen resigned as "Superintendent" and the body organized temporarily with Rev. A. C. Preus as chairman and Rev. G. F. Diedrichson as vice-chairman. A draft of a proposed constitution was submitted, considered, and tentatively adopted, subject to further consideration at a convention to be held the following year. The convention consisting of the six pastors and thirty-six delegates, thereupon perfected a temporary synodical organization by the election of a president, Rev. A. C. Preus, and a church council.


RT. REV. H. A. PREUS

Pursuant to this arrangement, a third representative convention was held February 25, 1853, in the church at Eastern Koshkonong. Members of this convention were Revs. A. C. Preus, H. A. Preus, N. Brandt, H. A. Stub, G. F. Diedrichson, C. L. Claussen, and J. A. Ottesen, who in the latter part of 1852 had become pastor to the congregation at Manitowoc, Wisconsin, together with forty-five delegates, representatives from twenty-eight congregations, of the thirty-eight then duly organized. After due consideration, a constitution was now definitely adopted and the synodical union of the congregation in a central organization made permanent. Rev. A. C. Preus was honored with the election to the presidency and the organization was completed with the selection of a church council and executive officers. And this was the beginning of the Synod of the Norwegian Evangelical Lutheran Church of America, popularly known as the "Norwegian Synod." Rev. Ottesen writes of this important step: "Thus the Norwegian Evangelical Lutheran Synod was established upon the foundation of God's Word and in harmony with the confession of our fathers; established with the prayer that the gracious God would bless this church-body of Norwegian Lutherans, and that by His spirit and under His guidance it might serve to perpetuate among them and their children in the new fatherland the sound doctrine, to the glory of God and to the salvation of many immortal souls. The Lord grant it in the name of the Savior. Amen."

DR. V. KOREN

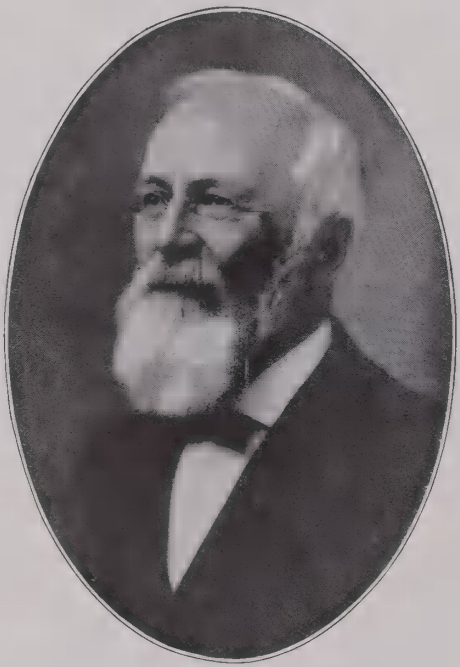
DR. H. G. STUB

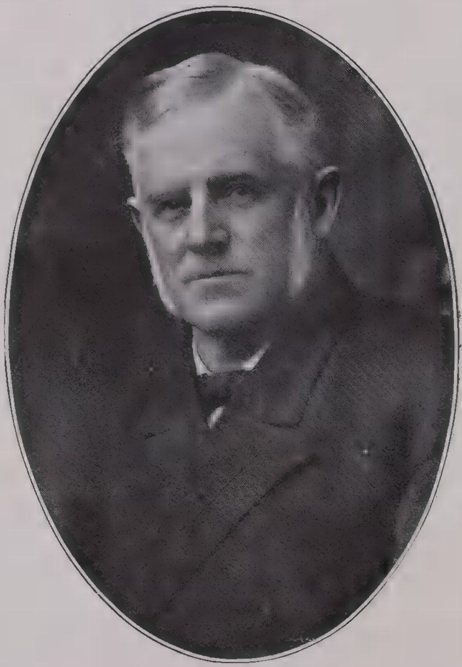
EDUCATIONAL INSTITUTIONS

From this time on the growth of the Synod was rapid and steady, increasing in proportion as the immigration of brethren steadily increased year by year. The demand for pastors soon outgrew the supply available from the Mother Church, and the problem of supplying pulpits became the pressing problem of the hour. It was apparent from the first that the church here must provide means and facilities for the education of its own clergy.

LUTHER COLLEGE, DECORAH, IOWA

The German Lutherans of America had already established seminaries and colleges for such purpose, and in 1865, at the convention at Spring Prairie, Rev. Brandt and Rev. Ottesen were chosen a committee to visit these schools at St. Louis, Missouri, Columbus, Ohio, and Buffalo, New York. Upon the recommendation of this committee, it was determined, for more immediate relief of the situation, to seek arrangements with the so-called German Missouri Synod to send students, both college and divinity, to their schools at St. Louis, and to establish there a professorship. This was effected, and in 1869 Rev. Laur Larsen assumed the professorship then created. Thus was definitely etablished the bond of fraternal relation which has ever since existed between this German Synod and our Synod. A brotherhood founded on unity of faith has been unfolded which demonstrates that faith is not one of nationality, but a spiritual outpouring of the fountain of Scripture in the human heart.


DR. LAUR LARSEN


PROF. C. K. PREUS

LUTHER COLLEGE

This arrangement, however, could grant only temporary relief. And at the same convention these pioneers resolved to at once begin the collection of a fund for the erection of their own school. As yet there were but twelve pastors and fifty congregations; but it was bravely determined to raise among them $50,000, so as to provide a school adequate for the purposes of both a college and a theological seminary.

Already, in 1861, in convention gathered, the Synod resolved to call Prof. Larsen from St. Louis, to begin to establish an independent college for their people. With the parsonage at Half Way Creek, La Crosse County, Wisconsin, devoted to school purposes, the first year of Luther College began with an attendance of eleven students. The German Lutheran seminaries were still to be used by students taking up the study of theology, until other arrangements for their instruction could be made. In its resolution of 1861 the Synod had determined that the permanent location of Luther College should be at Decorah, Iowa, where a tract of thirty-two acres, situated on an oak-studded plateau overlooking the beautiful valley of the tranquil Oneota River, was purchased as a college site. In 1862 the school was actually moved to Decorah, where it was continued in temporary quarters with a second year's attendance of thirty-two students.

Despite the Civil War, which was then raging, depopulating our communities, impoverishing our people, and seriously increasing the cost of labor and material, the work toward securing a permanent home for Luther College went on zealously and unceasingly, and on the 14th day of October, 1865, there was dedicated to the great cause of Christian education, with most impressive ceremonies, a beautiful and commodius school building, costing $75,000. This magnificent structure was wholly destroyed by fire in the year 1889; but the work of the institution went on uninterruptedly. The campaign for a new school building secured immediate results and on the 14th day of October, 1890, just twenty-five years after the first dedication, the dedication of a still more modern and adequate edifice was celebrated with great jubilation and impressive ceremony. The aim of the founders of this oldest and best known of the schools of learning among the Scandinavians in America was to establish a school which, while ranking in its instruction and scholarship with the best institutions of American learning, should nevertheless not neglect the instruction of their children in the principles of Christianity, making of this college a glorious instrument in the preservation of what they properly considered their greatest heritage, the Faith of their Fathers. While the primary object and aim may be said to have been the equipment and preparation of young men to take up the study of theology and service in the church, Luther College as such was equipped and has been maintained as a college in the true American sense and spirit, welcoming within its portals all who desired a college education, given upon a Christian basis and imbibed and exercised in a Christian spirit.

Luther College offers an eight-year course, four years preparatory work, and a four-year college classical course. Graduates are awarded the degree of Bachelor of Arts.

The college has had but two presidents since it was founded, Prof. Dr. Laur Larsen, from 1861 until 1902, and the present president, Prof. C. K. Preus, from 1902 on. The school has seventeen teachers and over 200 students, all boys. The institution has throughout its existence conferred the degree of Bachelor of Arts upon 637 graduates. Of these fifty-three per cent have become ministers and students of theology, 104 have become teachers, 39 have entered the medical profession, while 10 have become journalists and authors. Of those who have attended the institution for a longer or shorter period 389 have become clergymen.

LUTHER SEMINARY, ST. PAUL, MINN.

LUTHER SEMINARY

In addition to the college the arrangements with our German brethren for the instruction of our students in theology and preparation for the ministry was continued until our own school of theology could be arranged for. And in 1876 the beginning of a divinity school was made when Luther Seminary was established at Madison, Wisconsin, with Dr. F. A. Schmidt and Prof. O. Asperheim as instructors. The faculty of this institution was completed by the addition, in 1878, of Dr. H. G. Stub, and in 1897, by Dr. Joh. Ylvisaker. These last two

LAUR LARSEN HALL, DECORAH, IOWA

professors are still connected with our seminary, and who, together with Dr. O. E. Brandt and Prof. E. Hove constitute the present faculty.

Luther Seminary is the second institution of the Synod in point of age and has two departments.

LUTHERAN NORMAL SCHOOL, SIOUX FALLS, S. D.

There is a theoretical department, which is open to young men who have completed the classical college course and are trained in the ancient languages, Hebrew, Greek, and Latin. This was founded in the year 1878.

There is also a so-called practical department. This department offers to men who have not had the advantage of a complete college course, but who possess ability and a desire to serve the church of God, an opportunity to prepare themselves for the ministry of the Gospel.

LUTHER LADIES' SEMINARY, RED WING, MINN.

The theological seminary was established in Madison, Wisconsin, was later moved to Robbinsdale, near Minneapolis, and finally to its present location in St. Paul, where the Synod erected a magnificent building.

LUTHERAN NORMAL SCHOOL

Lutheran Normal School of Sioux Falls, South Dakota, is the third among the educational institutions of the Synod. It is the normal school of the church body. Its object is to educate pious and capable teachers for the parochial schools of the congregations and for the public schools.

The presidents of the institution have been Prof. A. Mikkelsen, 1890-1908, and the present incumbent of the office, Prof. Z. Ordal, from the year 1908.

From 1865 there was a normal department at Luther College, but this was discontinued in 1889, when the Normal School at Sioux Falls was founded.

The normal school offers three courses: A Norwegian, an American, and a Norwegian-American course; there being a demand in the parochial schools for teachers using either English or Norwegian, or in some instances both languages. The public school superintendents also frequently desire teachers of the Lutheran faith. The school employs ten teachers.

In addition to these institutions, the several communities of our people have from time to time established other institutions of learning to meet the needs of their locality, which schools, although not directly owned or controlled by the general synodical body, may nevertheless be said to be schools belonging to our Synod, embracing its spirit and traditions and exerting within their respective spheres of influence a beneficent activity. As the larger and more important of these may be mentioned: Pacific Lutheran Academy and Business College, Parkland, Wash.; Park Region Luther College, Fergus Falls, Minn.; Lutheran Ladies' Seminary, Red Wing, Minn.; Lutheran Academy, Albert Lea, Minn.; Luther Academy, Bode, Iowa; Luther College, Clifton, Texas; Northwestern Luther College, Velva, N. D.; Luther Academy, Wilmar, Minn.; Albion Academy, Albion, Wis.; Gale College, Galesville, Wis., etc.

THE RELIGIOUS SCHOOL

The religious school, parochial school, or as it has often been called, "The Norwegian School," has been conducted within the congregations from the earliest days. It has been looked upon as of the most vital importance. Still this work has had the greatest difficulties to contend with. During the pioneer period the school was conducted in the home. Later the public school buildings were used, or, where there was enough interest and the means could be provided, private school houses were erected by the congregations. The greatest difficulty

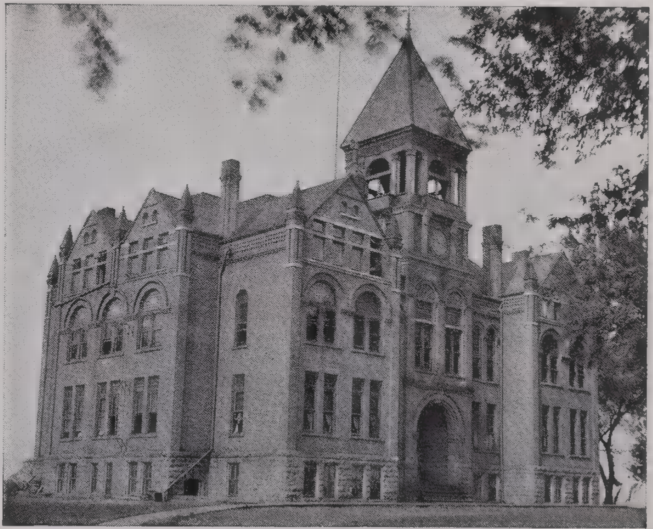
PACIFIC LUTHERAN ACADEMY, PARKLAND, WASH.

has been that the common school is in session nine months in the year. The religious school, therefore, must be conducted during the hot and busy summer months or be carried on simultaneously with the public school. This is the cause of much irregularity and dissatisfaction. The most satisfactory solution of the difficulty has been to establish complete parochial schools where in the Norwegian and English languages the requirements of the State as well as of the Church can be met. This arrangement, however, obtains in but few places. In the history of the Synod, published on the occasion of its semi-centennial, we read: "A sad chapter in the history of our church body is the matter of the children's religious school. It offers a problem the solution of which is of the very greatest importance to the future growth and welfare of the Norwegian-Lutheran Church in this country."

MISSIONARY ACTIVITY

Perhaps the most fruitful and blessed work in our church is the missionary activities exerted steadily and in increasing volume ever since the earliest days. The church has always laid great stress upon the missionary command of our Lord, and the pastors of the several congregations, in so far as their pastoral duties permitted, have exerted a missionary activity in reaching and bringing spiritual comfort to communities not favored with spiritual ministration. As the church became organized and increased in number and means, the missionary duty of the church also secured performance through organized agencies. Thus the mission for seamen received its first organized support by the establishment of a mission in New York. In 1860 Prof. Laur Larsen organized a congregation in that great gateway to America, but it had no pastor. In 1864 the congregation of Koshkonong contributed a fund to maintain Dr. F. A. Schmidt in New York during the summer interim. In 1866 this congregation received its first resident pastor in the person of Rev. O. Juul, who besides his duties as pastor acted as Seamen's Missionary and also traveled and effected the organization of other congregations on the Atlantic seaboard. The Pacific missionary activity first took definite shape in 1870 with the arrival of Rev. C. N. Hvistendahl at San Francisco. The subsequent history of the church in this city is described in other articles in this book.

In the furtherance of this missionary spirit and activity the church has established several agencies. The so-called "Inner Mission" directs its energies to reaching



LUTHER ACADEMY, ALBERT LEA, MINN.

those regions of America where our brethren have as yet no organized congregations and where the poverty of the congregations requires assistance from brethren in the maintenance of a a resident pastor. As a powerful and beneficial adjunct to this Inner Mission work, there is the so-called Church Extension, from which money is loaned to congregations needing such assistance for the building of houses of worship. And the Foreign or Heathen Mission receives active and loyal support in the maintenance of foreign missionaries and missions. What also may be considered as a missionary, rather than as a charitable movement, has been the establishment and support of homes for children and aged persons. All members of our church should familiarize themselves with these institutions and, bearing gratefully in mind the duties we owe to orphaned children and those on whom Father Time has laid a heavy and unkindly hand, contribute liberally to their support. While speaking of the missionary activities of our church one can not refrain from including in the home mission class the Ladies' Aid Societies, which by their work in our several congregations exert an influence for the good of our church, in its maintenance and in its extension, perhaps greater than any other individual agency, in so far as nearly every organized agency of the church finds its safest and surest support in these societies.

H. A. PREUS ACADEMY, ALBION, WIS.

WITTENBERG ACADEMY, WITTENBERG, WIS.

LUTHERAN PUBLISHING HOUSE

Another institution which has its origin in the missionary spirit of the church is the publishing plant maintained and operated by our Synod. It was apparent, upon the beginning of missionary activities, that the church should not merely advocate both religious and good, wholesome general literature for the family use,

PARK REGION LUTHER COLLEGE, FERGUS FALLS, MINN.

but should see to it that the means were provided whereby such literature could be secured. Furthermore, the publication of church periodicals, hymn books, and other work of the church, could not well be left to the vicarious performance of individuals. In order that the Bibles, hymn books, school books and good literature might be made available and brought within the reach of our people, there was in 1869 created a committee on publication, consisting of Rev. E. Wulfsberg, Rev. J. A. Ottesen and Prof. K. Bergh, who were given charge of this important work. The publishing business established and conducted by them was, in 1881, for the more convenient transaction of its business, incorporated. At every Triennial Convention of the Synod, a so-called Committee of Publication is elected, whose five members constitute the Board of Directors of Lutheran Publishing House, the corporate name of the business. In addition to the large importing and publishing plant maintained at Decorah, Iowa, a branch establishment has also been maintained since 1904 at Minneapolis, Minnesota. From this plant is issued "Kirketidende" in the Norwegian language, and "Lutheran Herald" in the English language, as the official organs of the church; "Boerneblad" and "Our Friend" are the official Sunday-school periodicals; with all of which publications the reader will be familiar. It would be impossible to enumerate here all the great publishing work performed by this institution, but the reader is referred to the large catalogue published and issued by this concern, which may be secured by a simple request mailed either to its Decorah or Minneapolis office.

ORGANIZATION OF THE SYNOD

The organization of the Synod is extremely democratic in form. The basis of the whole organization is the individual membership of the church. Each congregation is an independently self-governing body. The general synodical organization is an association or federation of the several congregations. Every third year this association meets in delegate convention for the election of a general management and the transaction of business relating to the interests of the whole church. The convention is composed of representatives elected and sent by the individual congregations, together with the pastors of the congregations. Owing to the numerical strength as well as the territorial extent of the Synod, making it impractical to hold conventions annually for the whole organization, and for the more convenient and expeditious transaction of church business, the organization or church body was, as it increased in

GALE COLLEGE, GALESBURG, WIS.

BRUFLAT ACADEMY AND BUSINESS INSTITUTE, PORTLAND, N. D.

WILLMAR SEMINARY, WILLMAR, MINN.

LUTHER COLLEGE, CLIFTON, TEX.

LA CROSSE LUTHERAN HOSPITAL, LA CROSSE, WIS.

ST. PAUL HOSPITAL, ST. PAUL, MINN.

PARKLAND LUTHERAN ORPHANS' HOME, PARKLAND, WASH.

size, divided into districts, each district having its own organization, with president, executive officers, and committees, who are elected at conventions held annually by the respective districts. At the present time there are five such districts, namely: The Minnesota District, Rt. Rev. K. Björgo, president; the Iowa District, Rt. Rev. O. P. Vangsnes, president; the Eastern District, Rt. Rev. J. Nordby, president; the Northwestern District, Rt. Rev. P. A. Hendrickson, president; the Pacific District, Rt. Rev. L. C. Foss, president. The presidency of the whole Synod has for its present incumbent Rt. Rev. H. G. Stub, D. D., who also occupies the chair of Dogmatic Theology at Luther Seminary. Dr. Stub is the fourth chief executive of the Synod. Rt. Rev. A. C. Preus, the first president, having served from its organization in 1853 until 1862; he was succeeded by Rt. Rev. H. A. Preus, who served from 1862 until his death in July, 1894. Rt. Rev. U. V. Koren, D. D., who was next honored with the presidency, served until his death in 1909, when he was succeeded by the present incumbent. All of the respective presidents of the general organization as well as of the districts have been talented men, who, with devotion to the church, great piety, zealous energy and great personal popularity, have combined great administrative ability, and the church has reaped a truly great harvest under the administrations of these gifted executives. The president and executive officers have since the first organization of the Synod been aided in the administration of synodical affairs by a Church Council and by special committees elected by the church to supervise important divisions of the church work, such as the committee on finances, the several committees on missions, regents of our schools, and the like, the members of which all have labored well and successfully for the church.

ENGLISH LUTHERAN MISSION

The work of the Norwegian Synod had its origin in the desire of the pioneers for church fellowship in the spirit and manner and doctrine of the Mother Church in the old Fatherland. As already stated, it in this way received for its name a title designating the nationality of its founders and the nationality of the church which they sought to perpetuate in the new land. By force of circumstances, likewise its principal membership has consisted of Americans of Norwegian extraction. The same adherence to nationality is found in the development of Lutheran churches among the Germans and the Danes and the Swedes. According,

WILD RICE ORPHANS' HOME, WILD RICE, MINN.

however, as these new citizens have become more and more Americanized, it has become more apparent to the Lutheran denominations of the same confessions that the creed is not one of nationality but one of scripture, and as the language is gradually changing to the uniform English, there is a gradual accession of persons of other national extraction but of the same faith attaching themselves to the churches. With the ever-increasing uniformity of language there can and will be a merger of people of a uniform faith in one organization irrespective of their national antecedents. Trinity Church and Grace Church of San Francisco, and St. Paul's Church of Oakland, are pioneers and exponents of this truth. One of the organizers of the Synod in 1853 was Rev. C. L. Claussen, a Dane, and since that time there have been numerous pastors of Danish descent who have given their services in the Synod. And due credit must be given for the share which these our Danish brethren have had in the work of our church. Our German brethren, having had a church organization of a date much prior to the organization of our own Synod, have had less occasion and opportunity of working within our organization; but, by their encouragement and co-operation with our Synod practically from its inception they have also exerted a great and beneficent influence upon its development.

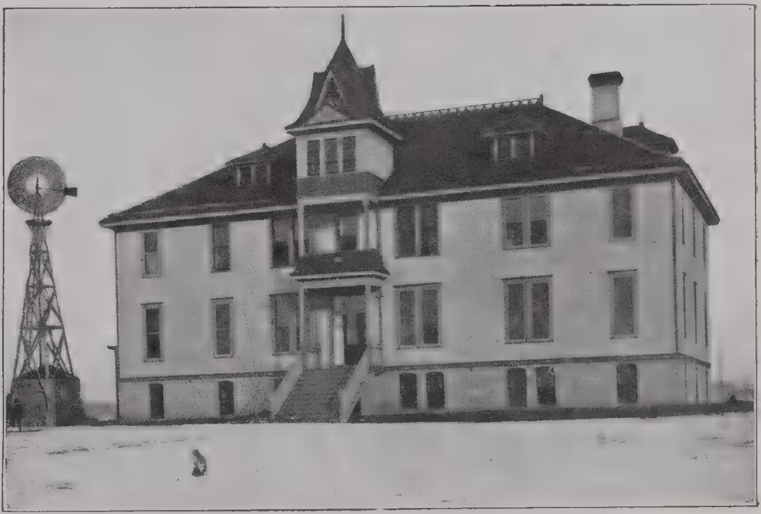
STOUGHTON OLD PEOPLES' HOME, STOUGHTON, WIS.

It should be recorded that in 1889 there developed an unfortunate controversy within the church regarding important doctrines, which resulted in a schism, a great many of the pastors and congregations withdrawing from the organization. But of late there have developed the most promising indications that there may again be effected a union or agreement in faith of the principal churches having as their confessions the confessions of the Lutheran Church of the Fatherland.

And great and glorious as has been the past history of our church, the promise of future accomplishments is still greater. That this promise may be realized should be the burden of our prayers, and the earnest effort of every member of our church.

In the official seal of our Synod is found the Greek word Gegraptai, *i. e.*, "It is written." This is significant. It points to the fact that our church body accepts the Holy Scriptures as the highest authority and the only sure and perfect rule in all matters of faith and life.

The Word of God's our heritage;
God grant we lose it never!
May we and ours, from age to age,
Exalt and praise it ever;
It is our help alway,
In life and death our stay;
O God, while worlds endure,
Preserve Thy statutes pure
To us and to our children.



MARTIN LUTHER ORPHANS' HOME, STOUGHTON, WIS.

MISSIONS IN CHINA AS SEEN BY A LAYMAN

By ROBERT DOLLAR*

[Robert Dollar, president of the Robert Dollar Steamship Company, has been a main factor in the upbuilding of the trade and commerce between the United States and China, and in 1910 led the Commercial Commission of the Pacific Coast to China. He is one of the foremost citizens of this metropolis, taking a live interest in the work of the church at home and in foreign lands and giving with a free hand to the extension of missions as well as to all worthy educational and charitable institutions.]

Standing as we do on the threshold of the door between America and China, it can not be otherwise than that we should take great interest in everything Chinese, and seeing that we are a Christian nation, everything that helps or retards the advancement of Christianity in China is of vital interest and importance to us.

RT. REV. K. BJÖRGO

We can not learn what has been done along those lines from statistics, as I claim that there are no correct figures available, for many thousands of converts do not come out openly, although they are good Christians at heart. To those who know the Chinese the reason is not far to seek; first, there is the family tie, that binds much stronger than with us. Then, those in the employ of the Government; for the sake of the good that they can do, it is well that they do not parade their Christianity; then, with the merchants a man who declares for Christianity loses the friendship of many of his old friends and associates. My experience has taught me to believe that for the time being they can do as much good in this way as if they came out openly. They are the leaven that is leavening the whole lump, as they are to be found in the highest places in the land.

RT. REV. L. C. FOSS

The missionaries have had a lot to contend with. First, to learn the language three years are required before they can start and many years after until they get near perfection. Then the health of many fails. Some turn out not to be adapted to the work, so it has been an expensive and discouraging undertaking. And for a long time results

RT. REV. O. P. VANGSNES

RT. REV. J. NORDBY

RT. REV. P. A. HENDRICKSON

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*In view of our Chinese mission, established only a few years ago, a word on missions in China by an authority on the subject like Mr. Dollar was thought would be timely as well as encouraging and instructive.

GLENWOOD OLD PEOPLE'S HOME, GLENWOOD, MINN.

were not much in evidence. But we were like the farmer sowing seed and expecting to harvest a crop before harvest time arrived. Now the harvest is at hand and results are in evidence on every hand, that is, to those who are unbiased and see it as it is. But China must be evangelized by the Chinese and the greatest work that is being done today in China is the educating young men to be teachers and ministers, and in teaching and educating young girls to be Christians and fitting many of them to be doctors and nurses.

I claim that the progress made in religion can best be measured by what has been done to advance them temporarily, so I offer a few facts and figures to show what has been done along these lines:

In 1903 the postoffice handled 23,000,000 pieces of mail; in 1909, 275,000,000 pieces.

Fifteen years ago there was ten miles of railroad carrying passengers and in 1910 there was over 6,000 miles.

The telegraph now reaches even small-sized towns and many of the largest cities have electric lights and telephones.

In education probably the greatest change has been made, as the old system was completely changed five years ago to our modern Western style, and now school houses are springing up by the hundreds, the great majority of teachers coming from the mission schools.

The form of government during the past three years has been changed from the old absolute monarchy to a limited monarchy with provincial assemblages and a ministry responsible to the people, and there are other changes and improvements far too numerous to mention here.

In summing up I am quite safe in saying that during the past ten years, no nation in the history of the world has made such rapid progress and radical changes to improve the condition of their people as the Chinese.

Now I claim that Christianity has made as great and as rapid strides as the material advancement that I have outlined. No doubt I will be considered radical to make such statements but I believe it to be true, especially as I have arrived at this conclusion after much thought, and from the viewpoint of a layman and not from the enthusiasm of one who is in the work.

LUTHERAN PUBLISHING HOUSE, DECORAH, IOWA

The United Norwegian Church*

THE United Norwegian Lutheran Church of America was organized June 12, 1890, in the Augustana Church, Minneapolis, Minn. Three organizations, the Augustana Synod, the Norwegian-Danish Conference, and the Anti-Missourian Brotherhood united to form the new church body. The immediate occasion for this union must be traced to the division in the Norwegian Synod on the doctrine of election. The Anti-Missourians did not consider it advisable to form a permanent organization. There were already too many Norwegian Lutheran church organizations. Therefore, at a meeting held by the Anti-Missourians in Trinity Church, 1888, it was resolved to send delegates to the annual meetings of the Augustana Synod, the Conference, and the Hauge's Synod. The object was to pave the way for union. The moving spirit in this work was Rev. P. A. Rasmussen. And the attempt succeeded beyond all expectations. All three bodies responded favorably and appointed union committees. This joint committee prepared Articles of Union and a new constitution. A joint meeting of about 300 pastors, professors and delegates from all three church bodies was held at Scandinavia, Wis., Rev. N. J. Ellestad, pastor loci, in November of the same year, 1888. At this meeting the proposed union documents were adopted with some changes. It now remained for each body to officially ratify the Articles of Union and constitution. At the annual meeting in 1889, the union documents were ratified practically unanimously by the Anti-Missourian Brotherhood, the Conference, and the Augustana Synod. Not so at Hauge's Synod. This synod decided that it was not yet ready for union,

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*This sketch is drawn from the Jubilee number of the United Lutheran.

RT. REV. GJERMUND HOYME

but the three bodies which had agreed on union met simultaneously in Minneapolis, Minn., on June 11, 1890. A joint committee consisting of Prof. G. Sverdrup, and Rev. J. Olsen from the Conference, Halle Steensland and K. Thompson from the Anti-Missourians, A. A. Klove and A. A. Ronning from the Augustana Synod, reported to each of these meetings that all conditions for union had been fulfilled. The Augustana Synod met at Augsburg Seminary and consisted of 23 pastors and 25 delegates; the Conference met at Trinity Church and consisted of 100 pastors and professors and 292 delegates; the Anti-Missourians met at St. Paul's Church of Hauge's Synod and consisted of 98 pastors and 313 delegates. Each church body finished the preliminary work in two days. On Friday, the 13th, everything was ready for union. The members of the Augustana Synod and the Anti-Missourian Brotherhood marched from their respective meeting places to Trinity Church. There the members of the Conference received them standing. As the Anti-Missourians marched into the church the hymn, "God's Word Is Our Heritage," was sung. When the Augustana delegation entered, all sang "Praise to Thee and Adoration." When all three parties had found their places, the entire body sang, standing, the Te Deum, and prayed the Lord's Prayer.

It was a great moment, never to be forgotten. Tears of joy filled the eyes. What had been prayed and worked for during many years had at last been realized. The old Trinity Church building was too small for the meeting, so a procession was formed, and the meeting moved to the Swedish Augustana Church, a few blocks away. Having arrived at the church, Luther's battle hymn, "A Mighty Fortress Is Our God," was sung and Rev. P. A. Rasmussen offered prayer. Prof. S. Oftedahl was elected temporary president, and Rev. J. N. Kildahl temporary secretary. Thus was organized the United Norwegian Lutheran Church in America.

The permanent officers elected were the following: Rev. G. Hoyme, president; Rev. L. M. Björn, vice-president; Rev. J. N. Kildahl, secretary, and Lars Swenson, treasurer.

The United Church then consisted of 245 pastors, 830 congregations, 83,500 confirmed members, 152,200 souls. There were congregations in Minnesota, Wisconsin, North Dakota, Iowa, Illinois, Michigan, Washington, Missouri, Nebraska, Oregon, Idaho, Maine and New Hampshire.

According to the Articles of Union the Theological Seminary was established at Augsburg Seminary. Prof. George Sverdrup was elected president of the seminary. The Theological Faculty consisted of Professors Sverdrup and Oftedahl from the Conference, Schmidt and Boeckman from the Anti-Missourian Brotherhood, and Lysness from the Augustana Synod. The latter died soon after the union meeting. In his place was elected Rev. E. G. Lund. He began his work in the fall of 1891.

It was apparent even at the union meeting that the new church body would have a period of storm and stress. The occasion for the strife was the adoption of St. Olaf College, Northfield, Minn., as the college of the church. The future historian will probably emphasize other causes, but this was made the excuse for many years of bitter strife. At the next Annual Meeting in Kenyon, Minn.,

RT. REV. L. M. BJÖRN

RT. REV. T. H. DAHL, D. D.

1891, Prof. Sverdrup opposed strenuously the motion to incorporate the church body. The motion was carried however. All the property of the church was transferred to the Board of Trustees except Augsburg Seminary. Then it was discovered that a close corporation and not the church owned Augsburg Seminary.

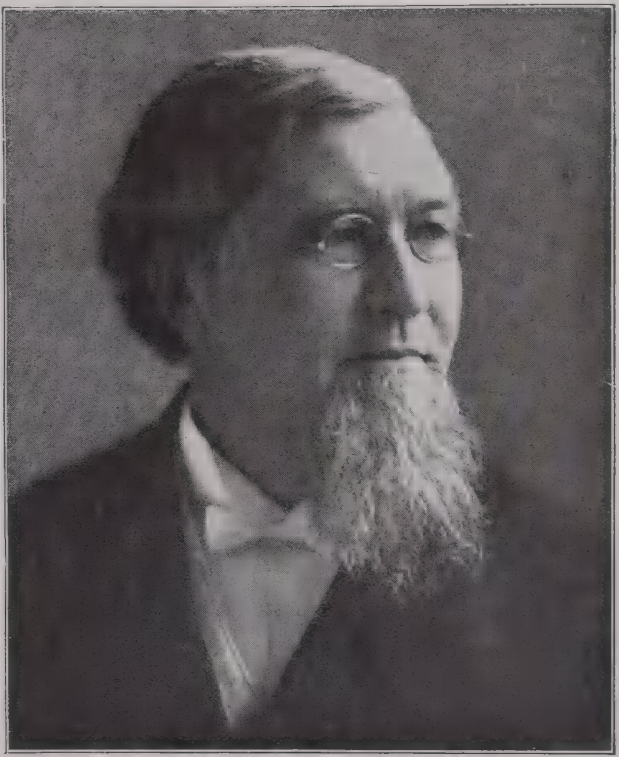
The next Annual Meeting was held in Dawson, Minn., 1892. It was a strange meeting. Nearly a week was spent in deciding who should preside. If it had not been for President Hoyme's great ability the meeting would probably have been caught in the legal traps set for it. But led by the president the majority remained true to the Articles of Union. In 1893 Professors Sverdrup and Oftedahl resigned as theological professors. They remained, however, at Augsburg Seminary and continued there until their death. The United Church was forced to move its Theological Seminary to rented quarters. Professors Sverdrup and Oftedahl were elected delegates to the Annual Meeting of 1894 held in St. Paul, Minn. They were refused seats in the meeting. The friends of Augsburg Seminary then organized the Lutheran Free Church. Thus was consummated another disruption among Norwegian Lutherans.

St. Olaf College was thrown on its own resources by the Annual Meeting of 1893. This step was taken to save the church from disruption. Until 1899 this college was dependent upon the gifts of its friends for support. Prof. Th. N. Mohn and Prof. H. T. Ytterboe led the college through these years of trial. It suffered most from the insinuations which were spread broadcast by its enemies; but truth finally prevailed. Prof. Mohn died in the fall of 1899 and Prof. Ytterboe in February, 1904. Now all appreciate their work. And buildings on the St. Olaf campus appropriately bear their names.

Rev. J. N. Kildahl, pastor of Bethlehem Church, Chicago, Ill., was elected president of St. Olaf College at the Annual Meeting of 1899. Under his direction and with the confidence and united support of the church, the college became the largest Lutheran college in the United States.

Since 1899 the United Church has grown rapidly and carried on aggressive work. Even in the first decade the church doubled numerically. Of far greater importance is the fact that during these years of strife the church became unified. Men learned to understand and tolerate one another. The principle of liberty in nonessentials, which is so characteristic of the United Church, was well established.

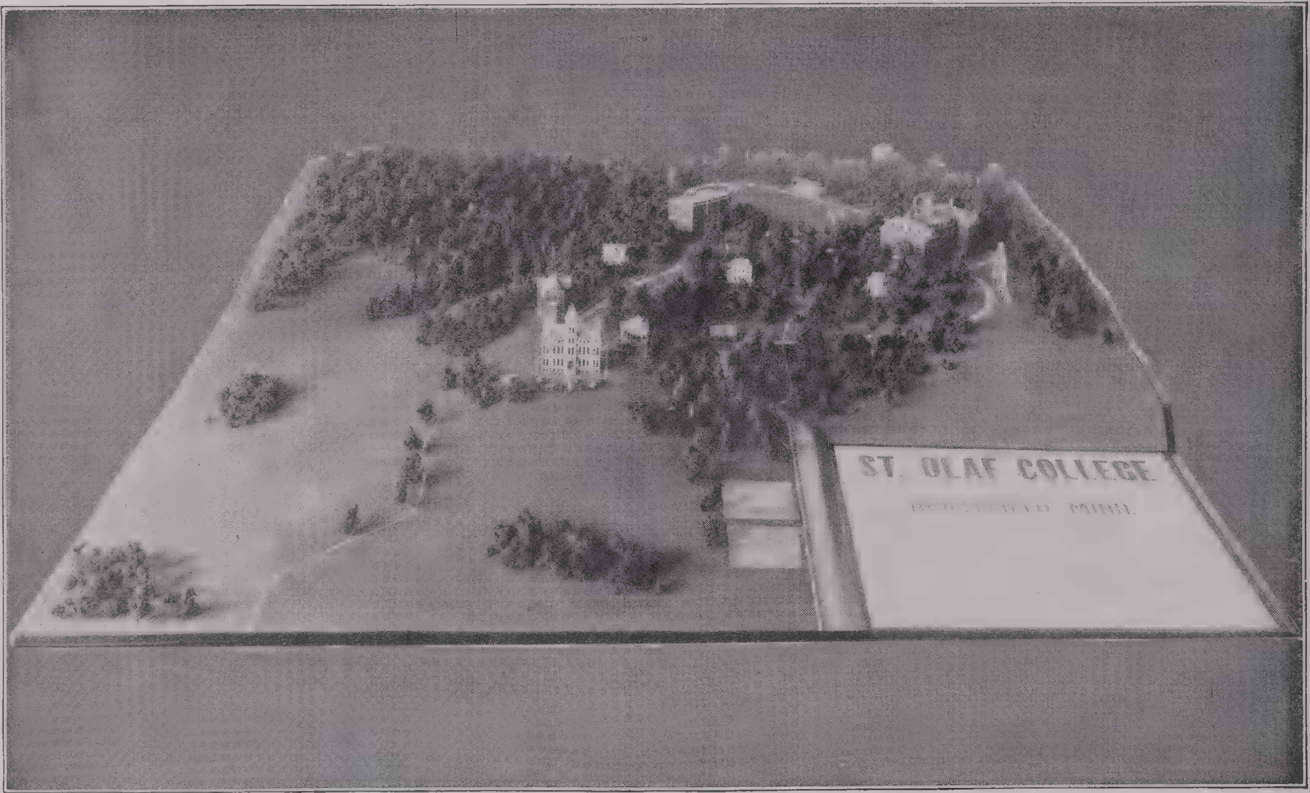
A new building for the Theological Seminary was built in St. Anthony Park, St. Paul, and dedicated in 1902. A normal school was established in Madison, Minn. The Deaconess Home and Hospital of Chicago was accepted by the church. The Bethesda Mission in Brooklyn was authorized by the church. The United Church has orphan homes at Beloit, Wis., Lake Park, Minn., and Wittenberg, Wis., and old people's homes at Decorah, Iowa, and Wittenberg, Wis. The church owns Augustana College, Canton, S. D. Seven academies and a large number of hospitals are conducted by members of the United Church.



RT. REV. N. J. ELLESTAD

Foreign mission work was begun in 1892. The Norwegian Missionary Society granted a portion of its field in Madagascar to the United Church. In 1903 it was decided to begin work in China. These missions have progressed steadily. The Zion Society for Israel and the Santhal Mission in India also receive a great deal of support from the United Church.

The United Church has not often changed officers. Rev. Gjermund Hoyme was president until his death in 1902. He was succeeded by Rev. T. H. Dahl, who still remains president. Rev. L. M. Björn was vice-president from 1890-1894; Rev. T. H. Dahl, 1894-1902; Rev. N. J. Ellestad, 1902-1912; Prof. J. N. Kildahl, 1912—. The first secretary was Prof. J. N. Kildahl, 1890-1895, and since that time Rev. J. C. Roseland. Mr. Lars Swenson was treasurer until his death in 1904, and was succeeded by the present treasurer, Mr. Erick Waldeland.



It has been felt for some years that the present organization of the United Church is too cumbersome. At the Annual Meeting in Des Moines, 1909, it was decided to divide the church into District Synods. A committee prepared preliminary plans, but action was postponed on account of the movement for a greater union.

It is now seventy-three years since the first Norwegian Lutheran Church was organized by Norwegian Lutherans in America. Those who organized this first congregation at Muskego, Wis., on September 13, 1843, were men of mature age. Thus it happens that in many of the older congregations in our church it is the third generation which now controls affairs. The children regularly attend the public schools and the official language of this country is their language.

At first Norwegian was used exclusively in the work of the church. But the need of using the English language has made itself felt particularly in the last decade. In 1914 the secretary of the church reported that 7,504 sermons had been preached in the English language during the past year.

In ten congregations English is used exclusively and in a majority of the congregations to some extent. In order to give an opportunity to discuss the problems of the transitional period and also provide a church meeting where the English language is used exclusively, the English Conference was organized in 1895. It meets annually and the attendance is usually large.

This Conference has no legislative or executive functions within the church, but its resolutions are forwarded to the annual convention of the church, where they have invariably been adopted. This year the Conference met in three sections, centrally located, in order to make the meetings more easily accessible. In this way it is possible for a large number of pastors to be present. This will undoubtedly result in five or six sectional meetings next year. The officers of the Conference are: Prof. C. O. Solberg, president; Rev. M. K. Hartmann, vice-president; Rev. C. C. A. Jensen, secretary; Rev. O. T. Storaaslie, treasurer.

Twenty-five years is a comparatively brief period in the history of the church. As a rule not very much is accomplished in that length of time. Yet the United Church has grown and prospered in its period of youth. There is no reason to be ashamed nor to boast. It is the Lord's work. What has been accomplished is by His grace, to Him be all the honor and glory. The work of our church in education, missions, charity is presented on the following pages.

It is yet too early to place the men who have held offices of responsibility in our church in their proper historical order. Many are still living. But the one outstanding personality of the first twenty-five years is no doubt Rev. Gjermund Hoyme. He was born in Valders, Norway, October 8, 1847, and came with his parents to the United States in 1851. He received his education at Marshall Academy, the University of Wisconsin, and Augsburg Seminary. He was pastor at Duluth, Minn., 1873; Menomonie, Wis., 1874-1876, and Eau Claire, Wis., 1876-1902. In the Conference he held many places of trust. He was elected president of the United Church at the union meeting in 1890 and continued to hold that office until his death. He guided the church during its early years in a wise and careful way. It is not too much to say that without him the United Church could hardly have survived. He died June 9, 1902.

PROFESSOR TH. N. MOHN

The burning question at present is that of church union. That Norwegian Lutherans in America have been and still are divided into several church organizations is due to a number of causes. The church conditions in Norway at the time of the first period of emigration was one factor. The Hauge revival in its second generation had a tendency to separate from the state church. The early pioneers spread over a large territory and it was no easy matter with the means of communication then available to gather them into one organization. Then doctrinal controversies arose in our church and disrupted it. But the idea of union has never been entirely forgotten. As far back as the early fifties there were informal meetings of the friends of Elling Eielsen and the Norwegian Synod. In 1859 a meeting was held in Chicago by members of the Norwegian Synod and the Augustana Synod. The third article of the creed and lay-activity in the church were topics discussed. Another meeting was held in Chicago in 1863. In 1864 the doctrine of absolution was discussed at Jefferson Prairie, Wis. Another conference was held at Decorah, Iowa, in 1871. No permanent results came from these meetings. Then came a period of ten years, during which practically nothing was done. A free conference assembled at St. Ansgar, Iowa, in 1881. Similar conferences were held at Roland, Iowa, 1882; Chicago, Ill., 1885; Kenyon, Minn., 1886, and Willmar, Minn., 1887. Strange as the statement may appear it is nevertheless true, that the controversy in the Norwegian Synod concerning election which resulted in the withdrawal of the Anti-Missourians from the Synod in 1887 was the occasion which made possible the organization of the United Church. At the union meeting of 1890 a committee was elected to confer with a committee from the Norwegian Synod. This joint committee called a delegate meeting at Wilmar, Minn., in 1892. The Willmar meeting elected a committee to continue the work. For various reasons nothing was done for several years.

In 1897 a free conference was held at Lanesboro, Minn. A similar meeting was held at Austin, Minn., in 1899. In 1901 representatives of the United Church and the Norwegian Synod met in a colloquy. In 1905 the question was again taken up by official committees from the Hauge's Synod, the Norwegian Synod, and the United Church. Since that time it has continued without interruption. In 1906 the joint committee reported on the doctrine of absolution and lay-activity in the church. In 1908 a common understanding was reached on the doctrines of the call and conversion. In 1912 the question of election was settled. In the same year the work of this committee was adopted by the three conferring church bodies. In 1914 the Norwegian Synod and the United Church adopted Articles of Union. Hauge's Synod postponed action. In 1915 the United Church approved the proposed constitution. Hauge's Synod decided to refer all union documents to its congregations. The Norwegian Synod has not yet acted upon the constitution. The tide for union among Norwegian Lutherans in this country is firm and strong. Nothing can stop it, for it is of God. Some may prefer to be left on the banks among the wreckage, but the tide will sweep on, resulting in the greater Norwegian Lutheran Church in America. The date is not far off. Many are earnestly praying and striving that it may be accomplished in the great reformation year, 1917.

ST. OLAF COLLEGE

St. Olaf College was founded on the sixth day of November, 1874. It owes its origin to Rev. Bernt Julius Muus, who for forty years was pastor of Holden congregation in Goodhue County, Minn., and who died in Trondhjem, Norway, on the twenty-sixth day of May, 1900. He associated with himself Messrs. O. K. Finseth, K. P. Haugen, O. Osmundson and Harald Thoresen, who formed a close corporation, adopting articles of incorporation and appointing the late Rev. Thorbjörn Nelson Mohn principal of the school. During the first four years of its existence, the school occupied temporary quarters in an old public school building which the corporation bought and which was located on the site of the present Congregational Church. In the fall of 1878 the school moved to its present site on Manitou Heights. The necessary funds were furnished by Norwegian Lutheran congregations in Goodhue and Rice counties, and by the citizens of Northfield.

Up to the year 1886 the name of the institution was St. Olaf's School; it was an academy, and self-supporting. In that year the name was changed to St. Olaf College and college work was begun, the first class graduating in 1890. From 1886 to 1890 it was supported by the Anti-Missourians, whose divinity school also found temporary accommodations in the main building. In the latter year St. Olaf College was adopted by the United Norwegian Lutheran Church of America, in whose service it has continued to be up to the present time, although the official relations with the United Church were severed in 1893, and for six years the college was supported by voluntary contributions. In 1899 it was again made the college of the United Church, and the Rev. J. N. Kildahl, of Chicago, was elected president of the college. Prof. Mohn died on the eighteenth day of November, 1899.

At the annual meeting of the United Church, held in Minneapolis, in June, 1900, action was taken by which the college department of the United Church Seminary was united with and transferred to St. Olaf College. By this act St. Olaf received a large reinforcement of teachers and students, and valuable additions to the library and to the educational apparatus.

Until the fall of 1900 the college department had only a classical course. But the year 1900 marks another step forward in the history of the college by the establishment of a scientific course. In the year 1909 a classical-scientific and a literary course were added.

From 1899 to 1911 St. Olaf College was controlled by the United Norwegian Lutheran Church of America in this way, that the members of the college corporation were the same as the voting members of the annual meeting of the United Church. In 1911 the college was formally deeded to the United Church, and the college is now directly owned and controlled by that body. In 1914 Prof. Kildahl resigned and Prof. L. A. Vigness was elected president.

The general aim of St. Olaf College is to give young men and women a higher education on the basis of the true Christian faith as taught in our Evangelical Lutheran Church. For it is our conviction that there is no true culture or education without personal Christianity. We believe that all mental training, in order to have any real value, must be blended with Christian faith and love. We are therefore desirous that all the young people of our church who get a liberal education should be under constant Christian influence and be directed by the religious instruction of the church.

The chief and special object of this school is to prepare young men for taking up the study of theology in order that they may become ministers and missionaries of the church.

The college grounds embrace 138 acres of land, well wooded with native trees. There are seven buildings. The Main Building, the Old Hall, Utterboe Hall, the Steensland Library, the Hoyme Memorial Chapel, the St. Olaf Association Hospital, and Mohn Hall. All the buildings are heated from a central heating plant. The library contains about 10,000 volumes. The present teaching force numbers 32 and the enrollment of students 550. There are now 580 graduates of the college. Since 1890 there have been enrolled 8,199 students. The graduating class this year numbered 62. Besides a number of legacies and gifts the college has an endowment fund of $250,000. The income from this fund is supplemented by appropriations from this church, which this year amounted to $22,500.

THE UNITED CHURCH SEMINARY, MINNEAPOLIS, MINN.

The college uses the elective system of instruction. The music department is very strong. The St. Olaf College Band and Choir have been heard in practically every important city in the Northwest and in several European countries.

THE THEOLOGICAL SEMINARY

The Seminary is a constitutional and organic part of the United Norwegian Lutheran Church of America, and is under the direct control of its Annual Meeting. This body elects its professors by at least a two-thirds vote. It also prescribes the course of study. It holds the title to all real estate used by the institution and retains custody of its funds. It administers these funds through its Board of Trustees. It also exercises supervision over the educational work of the Seminary through its Board of Regents.

The Seminary, in accordance with the Articles of Union (Foreningsartiklerne), was originally known as "Augsburg Seminary," and was located from 1890 to 1893 in the buildings at Minneapolis, Minn., which are now called "Augsburg Seminary." Pursuant to a resolution adopted at the annual meeting of the United Church, in 1893, it was removed to the corner of Franklin and Twenty-sixth Avenues South, Minneapolis, and has from that time been known by its present name. In the fall of 1900, it was removed to the corner of Twenty-fourth Street and Fifth Avenue South. From the latter place it was removed January, 1902, to its present permanent quarters, in the new seminary building in St. Anthony Park, Minneapolis, Minn. The removal from Augsburg Seminary was necessary in order that the United Church might obtain the full control of its divinity school, to which it was entitled according to both constitution and Articles of Union. This, in spite of the most earnest and repeated efforts, it could not secure so long as the school remained in its original quarters.

Until June, 1900, the United Church Seminary had, in addition to its theological department, a preparatory and college department. The United Church at its annual meeting, held at St. Paul in June, 1899, decided that its college and its theological seminary should be separate institutions. It further decided to make St. Olaf College the college of the United Church, and to erect buildings for its theological seminary in or near Minneapolis or St. Paul. At the annual meeting held at Minneapolis, Minn., in June, 1900, the United Church decided to transfer the preparatory and college departments of the United Church Seminary from Minneapolis to Northfield, and to combine it with St. Olaf College.

The aim of the Seminary is to train and educate worthy and Christian men in the various branches of theology, so as to fit them for the public ministry of the Gospel in the Norwegian Lutheran Church of this, and in the mission fields of other lands. The seminary course requires three years for its completion.

The Seminary is located in St. Anthony Park, Minneapolis, Minn. The building is new, modern and well equipped. During the past twenty-five years 482 men have graduated. The faculty consists of the following: Prof. M. O. Boeckman, president; Prof. E. Kr. Johnsen, Prof. C. M. Weswig, Prof. M. J. Stolee, Prof. J. N. Kildahl, and Dr. F. A. Schmidt, professor emeritus.

THE LUTHERAN NORMAL SCHOOL

Obedient to the command of the Savior, "Feed my lambs," the United Church immediately after its organization decided to erect and maintain a normal school for the purpose of educating teachers for parochial schools, in order that the little children might be instructed in the way of salvation. This school was erected at Madison, Minn., and has since its beginning, November 10, 1892, continued its blessed work.

LUTHERAN NORMAL SCHOOL, MADISON, MINN.

The aim of the Lutheran Normal School is to qualify young men and women for teaching in the parochial and in the common schools. A thorough knowledge of the branches that are taught in the public and parochial schools is given, and of such other branches of knowledge as will promote a general mental culture. In imparting this knowledge, we strive to lead the students into a study of the principles of teaching, and to train them to carry out these principles in practical work.

A thorough review of the common branches is given, in order that the students, when they go out to teach, may be able to secure a first-grade teacher's certificate. Special stress is laid on mastering the two languages, Norwegian and English, as our students will use these languages in teaching in the parochial and common schools.

The Normal School is now an accredited school, having been recognized by the State authorities, so that the graduates of the normal course receive a first-grade teacher's certificate without any further examinations. This puts the Normal School on a par with the high schools of the State, that have a teachers' training department.

AUGUSTANA COLLEGE, CANTON, S. D.

In order to carry out the provisions of the arrangement made with the state authorities a model school was organized last fall. The equipment of the school consists of: 1. The Main Building is a stone and brick structure, 50x75 feet, three stories high and basement, the latter being built of Mankato stone. The value of the building is about $26,000. 2. The Boys' Dormitory was erected in 1898 at a cost of $11,000. It is a three-story brick building, 42x75 feet. 3. The Ladies' Dormitory was built in 1914 at a cost of $30,000. This building provides room for 86 girls. There are a few single rooms, but most of the rooms are furnished for two. This building is modern in style and in equipment. All buildings have steam heat and electric lights.

Since its founding the school has graduated 401 students. There have been three principals, Rev. O. Lokensgaard, 1892-1906; Rev. H. O. Fjeldstad, 1906-1907; Prof. K. Lokensgaard since 1907. There are nine teachers.

AUGUSTANA COLLEGE

Augustana College was, for thirty years prior to 1890, a school of the Lutheran Augustana Synod. At this date it came under the management of the United Norwegian Lutheran Church of America, formed by the union of the Augustana Synod, the Norwegian Lutheran Conference, and the Anti-Missourian Brotherhood. Prior to 1869, its history is identical with the Swedish Augustana College, of Rock Island, Ill. It was established in Chicago, Ill., in 1860; moved to Paxton, Ill., in 1863; separated from the Swedish College and moved to Marshall, Wis., in 1869, to Beloit, Wis., in 1881, and to Canton, S. D., in 1884.

WALDORF COLLEGE

Waldorf College, Forest City, Iowa, owes it existence to Rev. C. S. Salvesen. In 1903 he purchased for $18,000 a hotel build-

WALDORF COLLEGE, FOREST CITY, IOWA

ing worth $70,000. This was transferred to the Waldorf Lutheran College Association and the school began its work September 23, 1903. Prof. L. W. Boe became the first president of the school and served until 1915. Much of the success of the school is due to the energetic work of Prof. Boe. In 1911 a boys' dormitory building was finished. Before his death, Rev. J. M. Dahl presented to the school 558 acres of land in Winnebago County, Iowa.

PLEASANT VIEW COLLEGE

On July 4, 1893, Rev. N. J. Lockrem in an address in Stevens Grove, Kendall County, Illinois, urged the necessity of a Lutheran school in the Chicago District. This resulted in the organization of the Illinois Lutheran College Association at the court house, Ottawa, Ill., on May 1, 1895. This was later changed to Pleasant View Luther College. The city of Ottawa offered thirteen acres of land and fifty city lots. The building was ready and the school opened September 19, 1896. In 1913 a modern ladies' dormitory was erected.

PLEASANT VIEW COLLEGE, OTTAWA, ILL.

The purpose of the school is to give thorough instruction in high school courses and the Lutheran faith. Since its beginning there have graduated 337. Prof. L. A. Vigness was president until 1913. He was succeeded by Rev. H. M. Thompson, then pastor of Grace Lutheran Church, Eau Claire, Wis. The faculty numbers eight.

SCANDINAVIA ACADEMY

The Scandinavia Academy Corporation was organized by members of our church in and near Scandinavia, Wis. The cornerstone of the academy building was laid by Rev. G. Hoyme on July 4, 1893. On October 31, 1893, the building was dedicated by Rev. K. O. Eidahl, and the school began. The first principal was Rev. C. O. Aubol. The main building is 50x80, three stories high, and cost $20,000. The gymnasium is about the same size as the main building. The location near Silver Lake and the village of Scandinavia is very beautiful.

SPOKANE COLLEGE

Spokane College, Washington, dates back to August 9, 1905, when a group of members of the United Church from Eastern Washington, Idaho and Montana met in Spokane and formed the Spokane College Corporation. The Spokane Chamber of Commerce pledged $5,000 and the Spokane-Washington Improvement Company donated ten acres for a building site on Manito Heights. A building costing $52,000 was ready for occupancy October 7, 1907. A gymnasium 102x54 was erected in 1910. During the past eight years 143 students have received instruction and 131 have been graduated. Prof. P. M. Glasoe, Ph. D., was the first president. He resigned in 1910 and was succeeded by Prof. B. F. Westmore. Rev. H. O. Shurson was president for two years. In 1913 Prof. R. Bogstad was elected president and in 1914 Rev. A. O. Ulvestad. During the past year the Ohio Synod has cooperated in conducting Spokane College. The faculty now numbers eighteen and a large number of courses are offered.

CONCORDIA COLLEGE

Concordia College, Moorhead, Minn., was established for the Christian education of young men and young women. The management believes in combining sound instruction in the principles of the Christian religion with all the secular branches in the various courses offered by the school.

The Northwestern Lutheran College Association, organized April 14, 1891, and incorporated July 8, the same year, purchased the Bishop Whipple School, which a few years previously had been erected by Episcopalians at cost of $25,000. The new institution was named Concordia College, and began its work October 15, 1891. Amid fitting ceremonies it was formally dedicated to educational work on the 31st of October, 1891.

COLUMBIA COLLEGE

The Pacific College Association of the United Norwegian Church was organized August 22, 1905. A Board of Trustees was elected. Ground was secured in Everett, Wash., and during 1907-1908 the college building was erected. It was 140x65, three stories high, and built of concrete. It was dedicated October 31, 1909, by Rev. J. O. Hougan. The school began its work at once. Prof. C. B. Runsvold was president until 1913, when he was succeeded by Rev. R. Bogstad. The present faculty numbers twelve.

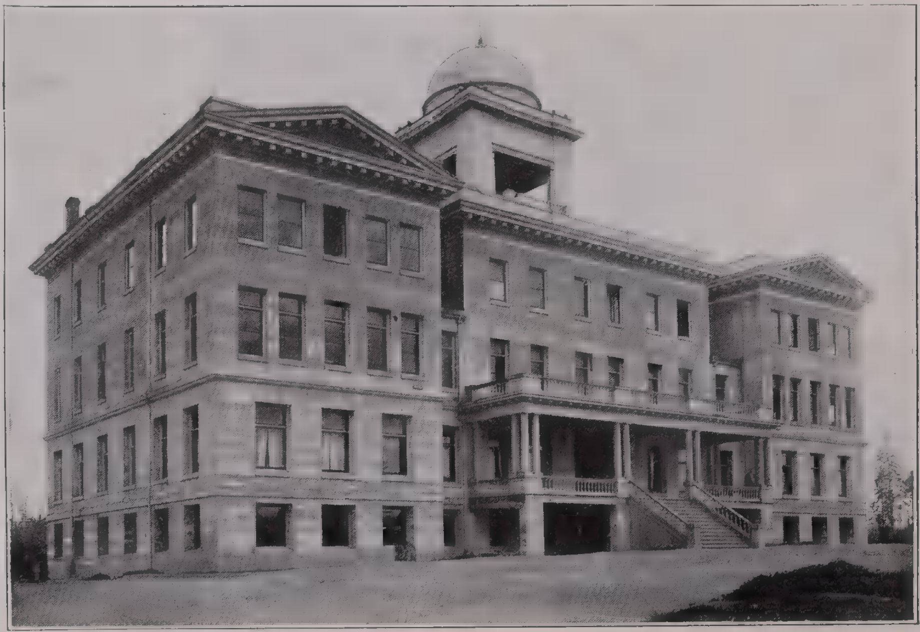
CAMROSE LUTHERAN COLLEGE

The Alberta Norwegian Lutheran College Association

SCANDINAVIA
ACADEMA,
SCANDINAVIA,
WIS.

CONCORDIA
COLLEGE,
MOORHEAD.
MINN.

COLUMBIA
COLLEGE,
EVERETT,
WASH.



was organized August 10, 1910, in Camrose, Alberta, Canada. It consists of members of the United Church and Hauge's Synod. The school began its work in a rented building, the Heather Brae House, October 2, 1911. The cornerstone of the college building was laid in 1911 by Rev. Gustav Stearns, and dedicated June 26, 1913, by Prof. J. N. Kildahl.

SASKATCHEWAN NORWEGIAN LUTHERAN COLLEGE

At a meeting of the Saskatchewan District held in Rudy, Sask., in the spring of 1909, Rev. N. C. Brun, Lake Mills, Iowa, urged the necessity of building a Christian high school in Saskatchewan. In 1910 he was elected to get offers from different places for the school. A meeting of pastors and delegates was held in Broderick on November 22-23, 1911, at which the offer of the city of Outlook was accepted and Saskatchewan Norwegian Lutheran College Association organized. Rev. H. L. Urness was the first president and Rev. J. M. Mason the first secretary.

The foundation of the college building was built in 1914, and will be finished and the school opened early in 1916. The property consisting of forty acres on the Saskatchewan River is very desirable for school purposes.

SPOKANE COLLEGE, SPOKANE, WASH.

BOARD OF REGENTS

The educational institutions which receive aid from the United Church are supervised and inspected by a Board of Regents. The members are: Rev. T. H. Dahl; Rev. O. G. U. Siljan, alternate Rev. O. M. Norlie; Prof. J. A. Aasgaard, secretary, alternate Rev. Edw. Nervig; Prof. J. E. Granrud, alternate Mr. Julius Hopperstad; Prof. C. P. Lommen, alternate Mr. T. J. Svien.

CAMROSE COLLEGE, CAMROSE, ALTA, CAN.

FOREIGN MISSIONS

The United Church has taken a great interest in the work of the foreign missions ever since its organization. A steady and virile growth is witnessed whereever its efforts have been directed. Madagascar and China are the main fields of foreign missionary activity within the United Church.

At the opening of the year 1915, the church had 51 foreign missionaries in its service. In the interval 47 had been sent out, and the native workers now numbered 200. The Daughter Churches in China and Madagascar have now grown to the number of 4,305 baptized. This year finds 1,517 catechumens, while the friends and followers of the mission work number thousands. Each year finds as many candidates for service here at home, both men and women, as it can afford to send out. The income totals in the past fiscal year $110,727.46.

HOME MISSIONS

When the United Church began home mission work twenty-five years ago, the western limit of the field extended from the Canadian boundary south through central North and South Dakota. Now the western limit is the Pacific Ocean and the field includes three great provinces of Canada—Saskatchewan, Alberta and British Columbia. To the east and south the boundary has not changed very much. But the people have scattered everywhere in the United States and Canada. The church has established on an average of ten new mission parishes each year, 250 in all. The spiritual fruit God alone knows; but it is certain that the extensive home mission activity of this church has been no small factor in its growth the past twenty-five years, and it has reached multitudes of the people who have not joined the church, and saved them from the darkness and despair of heathendom.

The home mission work falls under the following heads: Church Extension; University Mission; English Home Mission; Evangelistic Work; Prison Work; Mission at Faribault, Minn.; the Bethesda Mission, Brooklyn, N. Y.; the Brooklyn City Mission.

CHARITABLE INSTITUTIONS

The United Church maintains a number of charitable institutions. The following may be mentioned: Thomas Hospital, Minneapolis, Minn.; Lake Park Orphans' Home, Lake Park, Minn.; Beloit Orphans' Home, Beloit, Wis.; Aase Haugen Old People's Home, Decorah, Iowa; Fairview Hospital, Minneapolis, Minn.; the Deaconess Home, corner Haddon Avenue and North Leavitt Street, Chicago, Ill., and the Orphans' Home, Wittenberg, Wisconsin.

BOARD OF CHARITIES

All institutions of mercy in the United Church are under the supervision of a board established in 1910. The board consists of a representative from each local board, annually nominated by the same, and an equal number elected outside of this membership, who hold office for three years. The board inspects all institutions of mercy, and does what it can to help them secure the necessary support, gives counsel as to the management and policy of each institution.

FAIRVIEW HOSPITAL, MINNEAPOLIS, MINN.

THOMAS HOSPITAL, MINNEAPOLIS, MINN.

Prayer, as it brings us constantly into the presence of God, gradually conforms us to the moral image of God. We become God-like. There is a resemblance to God in our spirit, object and actions. And as it is impossible to live to purpose if we are not like God, the man of faith is the man of prayer, and the man of prayer is the useful man.

AASE HAUGEN OLD PEOPLE'S HOME, DECORAH, IOWA

ORPHANS' HOME, WITTENBERG, WIS.

BELOIT ORPHANS' HOME, BELOIT, WIS.

THE ANNUITY FUND

A thorough system of pensions of the aged and infirm workers of the United Church was worked out which will include the deaconesses of the Church as well as the pastors and professors. A plan for pensioning aged pastors and professors was adopted by the Church in 1909 and was put into operation two years later.

Under the plan now in operation every pastor or professor who wishes to become entitled to a pension must donate $200 toward the permanent fund. At the convention which adopted the plan it was decided not to touch the principal, and that no pensions should be paid until the fund of $100,000 was raised. The convention voted to engage a secretary who should endeavor for three years to raise the fund both through memberships among the clergy and through donations. The Rev. A. Oefstedal was selected and in less than two years the amount was reached and the pension plan put into operation.

At the same time as the plan was adopted in 1909 it was also decided that one-third of the net proceeds of the Augsburg Publishing House should be added to the amount accruing in the form of the interest to be distributed each year to those entitled to pensions. Last year it amounted to $9,000.

Those who are entitled to a pension are pastors and professors who have had to resign be-

MISSIONARY COTTAGES, ST. ANTHONY PARK, MINN.

cause of loss of health; pastors and professors who have given twenty years to the service and have reached the age of sixty-five years and have resigned; the widows of pastors and professors; and pastors' or professors' children under sixteen years of age, if both the father and mother are dead.

The amount granted each year is the same in all cases, but no pension can ever be more than $500 a year. If any pastor is deposed for cause, he loses his right to a pension, but his $200 is returned to him. If a man has spent twenty years in the ministry and then goes into some other line of work, he may still receive his pension at the age of sixty-five years.

LAKE PARK ORPHANS' HOME,
LAKE PARK, MINN.

THE DEACONESS HOME,
CHICAGO, ILL.

No definite amount is guaranteed, but up to this time each pensioner has been paid $500 annually. In the future each pastor will pay $10 annually to the fund, and each congregation will be asked to contribute $10.

The plan which was adopted for the deaconesses requires the Church to pay in $5 a week for every sister who has finished at the Deaconess Home in Chicago and the money so paid will become a fund, the interest on which will pay the pensions. At the age of sixty, each deaconess will have the opportunity of choosing whether she will remain in the Deaconess Home and be cared for there or take her share in the pension and live elsewhere. The interest accruing from the fund will be divided among the deaconesses who are eligible for pension, but no sister will receive more than $500 a year.

PUBLICATIONS

Periodicals have been published by the United Church from the time of its organization. Four weekly papers are now issued: "Lutheraneren" and "Luthersk Börneblad" in the Norwegian language; "The United Lutheran" and "Children's Companion" in English. The publishing house is situated at Minneapolis, the official name being the Augsburg Publishing House.

AUGSBURG PUBLISHING HOUSE BUILDING, MINNEAPOLIS, MINN.

CALIFORNIA

INTRODUCTION

CALIFORNIA, located as it is on the far western borders of our country, where its shores are washed by the placid waters of the great Pacific, is truly a wondrous commonwealth. Its early history is clothed in romance and poetry made famous by the writing of the story of "Ramona," the tales of Bret Harte and the poems of Joaquin Miller. It was the home of the old Mexican and Spanish grandees who lived here in primitive grandeur on their broad acres, gaining wealth from the soil and their countless herds of cattle. The great pastoral peace and happiness was soon disturbed when, in 1848, gold in large quantities was discovered in its hills and mountains and on its great, broad plains and valleys. Thousands of adventurous souls flocked thither from all parts of the civilized world. Yerba Buena, a little straggling village located on the peninsula that projects northward forming the beautiful bay of San Francisco, was the scene of great activity and in a few years, as the resources of the surrounding country began to be developed, it soon became known as the metropolis of the West, a position that it has held ever since. This little village of tents and sand dunes changed, like the chrysalis of the butterfly in the twinkling of the eye, into a beautiful, rapid-growing city—until San Francisco became truly the "Pearl of the West." Because of its great wealth in gold and its beautiful fields of wild flowers, California soon became known as the Golden West and in 1850 it became one of the great states of the Union.

Its western borders are kissed by the last rays of the setting sun, as the golden orb of day sinks beneath the waters of the Pacific. Its wondrous climate, made more so by the warm influence of the Japanese current that strikes against its western borders, and its great central valley enclosed on all sides by mountain ranges where Nature has given it a soil rich in fertility and productiveness, all have contributed their share to its remarkable growth and development.

The transition of California from its early occupation to the present time is truly interesting and instructive. When first the white man came he found the great central valley of the State a magnificent natural park threaded by crystal streams, dotted by groves of splendid oaks and luxuriant with native grasses and wild flowers. It was the home of countless herds of elk and antelope, of deer and bear and myriads of wild fowls. Mountain borders, faint and blue in the distance, were the only visible limits to an empire of beauty and virgin fertility and a huntsman's paradise. The early Spanish settlers brought droves of cattle to range in this veritable garden where they found abundant forage; from the Mexican government the favored ones received grants of large areas and established ranches, many of which have long since passed to other hands.

The American population followed, turned these prairies into grain fields, and the cattle ranges of the Mexican era became the great grain ranches for which California soon became famous. As the country began to settle up, the value of these lands for intensive cultivation to a great variety of crops became manifest and the subdivision of these immense realms into smaller holdings became the order of the day—then California entered upon its new era of development and growth. Irrigation is the fairy, the waving of whose wand has brought about this wondrous change.

The returns of the last census show an unprecedented increase in population. This increase has not been gained through the magnetism of its rich gold-fields, but has been brought about by irrigation and the wonderful development of its agricultural resources. The real wealth of any section lies in the development of its latent mineral and agricultural resources, and nowhere in the United States are there greater opportunities than in this great State.

The spirit of the West is one of optimism and progress. It is this spirit that laid the plans for a great international exposition in San Francisco and which, although severely handicapped by the influence of the great world's war in Europe, has been carried through to completion, with a balance on the right side of the ledger, the now world's famous Panama-Pacific International Exposition. It is this spirit that has made Southern California accomplish the wonders it has done in changing what was practically a desert waste into thousands of acres of beautiful golden orange and lemon groves. It is this spirit that has rebuilt the great city of San Francisco, which has risen like the Phoenix of old from its ashes. It is this spirit that has made the city of Fresno rise on the plains of the San Joaquin and become, as it has, the great raisin-shipping point of the entire country. It is this spirit that has been behind the wondrous growth of Sacramento, the capital of the State, which rests on the bosom of the broad Sacramento Valley and has become the leading deciduous fruit-shipping city of the West, besides being the most extensive railroad center of the State. Nowhere has this spirit of progress been more manifest than in the great central valleys of the State. Cities, populous and great, attractive and prosperous have sprung up, broad vistas of fertile fields have been cultivated, and blossoming orchards have been planted whose yields are prolific beyond comparison.

Economic forces are at work today in this great western country which are gradually but surely shaping agricultural development along new lines, and in this development lies the future wealth of this great commonwealth. These great forces are working together for better schools, better roads, rural delivery, telephones, trolley lines—all of which is being brought about through the influence of irrigation, which has developed a spirit of co-operation and frequent association with neighbors.

While California has been making these wondrous strides in developing its many natural resources, other matters of equal importance have not been neglected. Its school system is second to none in the entire United States. At the head stand its two great universities of national reputation—the State University at Berkeley, supported by the State, and the Leland Stanford Junior University, located at Palo Alto and richly endowed by the late Leland Stanford, as a memorial to his son who passed to the Great Beyond in the prime of life. Normal schools and high schools are found in all parts of the State, to say nothing of the thousands of graded schools that are to be seen on all sides. Its educational system is one of the bright gems in California's crown of achievements. This State can no longer be thought the ''wild and woolly West,'' for churches of all denominations are found in every section, and its people are happy and contented, surrounded by all the advantages of life.

It has always been the pride of people from every portion of the globe to some day found a home of their own under the sunny skies of California. Why should it not be so, for here they have the finest and healthiest climate in the world, where roses bloom throughout the year and where one is free from the snow and frost of other sections and where Dame Nature is working all the time for their happiness and success.

There is but one California, and it is rapidly becoming the ''Mecca'' of countless thousands, where they can regain their lost health, delve in the soil and occupy the position that God intended they should, surrounded by comforts and reaping the rewards of honest labor intelligently applied. It is such surroundings as these that have made the people of California the generous, considerate and open-hearted people we well know them to be. It is the inspiration of such surroundings that has carried the banner of this wondrous State to its present position of wealth, influence and standing. No undertaking is too difficult for its people to carry through to a successful conclusion. The writer, although not a native of the State, has lived among these people of the Golden West until he has become one of them who knows from experience that the half has not yet been told of the wonderful possibilities and developments that are to take place in this land by the Western sea.

STATE CAPITOL OF CALIFORNIA AND GROUNDS
"The Pride of the West"

RESOURCES OF CALIFORNIA

WE WISH to put before you the natural advantages which California offers the settler. But before we do this, it is important that you see the changes which are taking place in the farm life of California, and the opportunities which this creates for profitable investment. The old California is unchanged. It makes its appeal to the settler with all the force which belongs to the nature of things, and offers a living under the most favorable conditions. But today we have a New California in process of development, and this offers not only all the old natural advantages, but advantages which grow out of a new agricultural and economic situation. It is worth while to understand it at the very outset. It is not difficult and it may be profitable.

MORE FARMERS WANTED

If you are not familiar with the history of California agriculture, you may be perplexed to know why the great sunny State is settled only in spots. Riding over the plains of the interior, seeing an established community here and there, a fringe of farmhouses in the distance and miles of clean, level lands without homes, without farm buildings, without fences or fields, trees, orchards or gardens, you get an impression of the nakedness of the land and want to know why it is not densely settled. Its settlement has been retarded by the conservatism of large landowners. Great tracts of the best land in the State have long been held under one ownership and farmed to one crop, no portion of the land being for sale. There was something in managing 20,000 acres that gratified a man's ambition; it stirred his imagination to do big things, even to seeing a procession of mule teams turning furrows that required a day's journey to make a "round."

But in the nature of things this could not last. The outraged soil began to protest; the crops deteriorated; the owner grew old; death and the Probate Court got in their work, and land that could not be purchased at any price was presently on the market in subdivisions.

The country can not do without the farmer—the one indispensable man. The real and fundamental prosperity of any state is rooted in the soil. Soon or late all other forms of industry rest back upon the farms for support, and the very greatness of the Nation has its foundation in the homes of men who till their own land.

Here is the weakness of the old California. Her farms were few. Her real agricultural wealth remained undeveloped while a few men owned the land.

DECLINE OF BIG RANCHES

Today the best estates are open to the settler. For the first time in her history California is getting down to a general and rational farm basis. The State is emerging from a long period of speculative farming. It is the end of one and the beginning of another stage. An industry requiring but a few men a part of the year is giving place to an industry requiring many men, and in which every family owns a farm and builds a home. Land held by the few is becoming the possession of the many, and a country of big estates, big wheat-fields, of big cattle ranches, is finding a new prosperity in the increase of the old-fashioned diversified farms. The whole tendency is to get down to the general farm of modest size and to multiply the number of landowners.

The change, we say, is of today. But it did not begin last week or last year. It has been slowly developing for a score of years, and it is here to stay. It is a true and natural evolution, and not an experiment.

California will always be a land apart. It will not develop after the pattern of other states save in this, that its agriculture will get back to the general farm idea and stay there.

Now the new day profits the settler by the new opportunities it develops. It is directly to his advantage that the New California has a surplus of land and a dearth of landowners—that is, of farmers. Here is elbow-room; here are prices regulated by a sparse rural population; here is access to the heart of great estates, the choice of superb lands in attractive localities, made doubly valuable by the development of communities around them. These lands virtually constitute a new country without pioneer conditions, and the advantages of the pioneer are here without his privations. If the settler has to have a little more "cash on hand," this necessity is balanced by the gain of railroads, trolley lines, towns and schools and churches. The settler comes into a land of marvelous productiveness, whose markets are organized, but whose wealth of soil has not been developed, and he finds all other things much as in the older state he leaves behind. This is what we mean by the New California. But not all we mean. There is a new spirit and purpose, a new direction of energies, new plans and ambitions which make necessary a larger population, and a multiplication of the farmer-folk, without whom no state gets on.

A NEW AGRICULTURAL ERA

The old was speculative; the new means "a living, and plus." The old dreamed of making a fortune—and made it at the expense of the commonwealth; the new makes homes and develops the resources of the country. The old said in practice, "Do nothing yourself that you can hire anyone else to do; raise nothing that you can buy;" the new lives by the soil; produces the things that are consumed at home—the things California still imports from the East, and produces also the things which the East consumes but can not produce. Thus the new farmer has his living from a generous soil and a surplus for the market. He adds to the wealth of the community by supplying what it once bought abroad, and he broadens the agricultural basis of the State to sustain future millions. He helps to make a home market by making a better basis for the growth of cities, and eases the burdens of others by increasing food supplies and keeping down the cost of living.

He is able to do well from the start because he comes into the midst of growing communities and into possession of lands that are among the best in the world, and that are ready for the plow. If in some cases the "rest" of fallow lands and lands that had reverted to pasture has not restored the humis—the organic matter—to the soil, rotation of crops under irrigation will speedily renew it. Alfalfa will make a luxurious growth at once, and presently will leave the soil better than when it found it.

But the point we urge is that the new farmer is not thrust back to take lands that have been picked over; he gets as rich lands as if the settlement of the State had just begun, and he is able, without loss of time, to devote them to the highest uses.

NEW PLANS AND PROSPECTS

The intending settler is not only concerned about what is, but about what is proposed. He is interested in the immediate future of the country he is looking to for a home. It is being prepared as never before for those who will develop its wealth of soil. There are large plans for colonizing, not by wholesale, but by individuals, putting a man upon his own land under the most promising conditions. This means that men on the ground have learned something about California farming and will not go farming against climate. There are large areas where grain will still be grown, but in the very nature of things and as the result of long experience of other methods, the valleys will be given to irrigated agriculture.

But we have had something to learn about isolated irrigation, and means of broader and more systematic irrigation and drainage—the two go together—are being sought. We have learned that we must do things together, on a large scale. It would seem that California can not do things otherwise. A great level area, larger than Massachusetts and New Jersey combined, is in one valley, and this can not be watered in patches, and the tendency is to unite—to get State aid and Federal aid and private capital—to do the thing broadly, redeeming from semi-aridity huge areas at a time, then filling the vast valley with thousands of homes and getting great naked stretches of country quickly into profitable cultivation. This means that we find it necessary to handle our problems in bulk, and not singly, and to deal with valleys, instead of tracts. The conditions, naturally, are ideal and the plans must match the greatness of the situation.

Now this in turn calls for more people. The land needs farmers; the farmers who are here need more farmers to help them grasp the great opportunities, requiring common support. This has been called in the East "the re-discovery of California," and one of the great magazines, using this phrase, says also that "until lately neither the Californians themselves nor the people of the rest of the Union have realized what a tremendous opportunity California affords, or what large responsibilities the possession of this land entails." It is a great natural "plant," which, if properly cared for and "run" wisely, is capable of turning out a good living for millions, and riches for a large proportion of them.

A GREAT FUTURE

The first great advantage of the settler is that he finds the old California here as Nature made it. The only change he finds is in the minds of men, and this shows itself in a better appreciation of great natural resources and a disposition to develop them. We know now, as never in the past, the great agricultural wealth of the State. And because there is still ample opportunity for those who wish to establish themselves in a favoring climate, where outdoor work may be comfortable and effective all the year, there is today an increasing interest in California and a wide movement of trade and population toward this Coast. The developments of the last dozen years have put this Coast on the commercial map of the world, and California especially is assuming great importance as the country most directly in line between the East of the American continent and the East of Asia.

The California trade bulks large; the California future looms up magnificently. The next quarter of a century will see a great expansion of California cities, and the countryside will become the homes of hundreds of thousands of people and the seat of a manifold industrial life. The foundations of a great and prosperous rural community are being laid broadly and deeply, and the settler who comes today will inherit all the wisdom we have learned from experience and profit by all our mistakes. The creation of a new and ampler civilization is involved in the trend of things today in California, and agriculture is to be its foundation.

The average American, if he considers the matter at all, gives only passing thought to the resources of the West, and does not stop to realize its enormous potentialities—what has already been accomplished, and what is yet to be done. In no country that we can name has the agriculturist a better foundation or a better outlook than in this New California. All her splendid resources of land and water, forests and minerals are situated where the great activities of the immediate future are to be, and where Nature has provided the most beneficent climate known for the enjoyment of man and for the highest success of the tiller of the soil. For the problem is always how to get a living and how to keep down the ever-increasing cost of living. California's share in the solution of that great problem is to grow more things to live on, and to grow the most at the lowest cost. And she wants farmers; all the conditions are right, but more farmers are necessary.

A HOME BENEATH CALIFORNIA'S SUNNY SKIES

A PROSPEROUS COUNTRY

California has vast natural resources and much private wealth. The financial strength of the State speaks well for her resources and the energy of her people.

In 1900 there were 20 states with a greater population, but in 1904 only 5 whose property, subject to ad valorem taxation, was greater than California. The per capita wealth stands in this order:

	Private Wealth Per Capita
California	$2,235.00
New York	1,700.00
Iillinois	1,635.00
Pennsylvania	1,609.00
Massachusetts	1,529.00
Ohio	1,308.00

This indicates ability to stand great financial strain, and at the same time suggests high average comfort. California has its contingent of people who have no property, but has not many who are abjectly poor. The cities have no tenement districts, or tenement houses, and California tramps and hobos are chiefly an importation—the migrating folk who come here to winter in the open air.

If we ask about bank capital, the ratio to deposits shows great relative solidity, bank capital being the security of the depositors. The per cent is shown by comparison: Thus:

Pacific States, except California	23 per cent
California	29 per cent

This State has a large proportion of savings banks—131 as against 359 in the commercial list. Savings banks are not expected to have large capital. Many have none. If the comparison were made with commercial banks, the showing would be still better.

Taxation in California is a little higher than in states having less area and a more compact population. It costs us relatively more to govern ourselves. But computed on the true value of property, only two states of the six richest ones have lower tax rates than California.

These are Pennsylvania and Illinois. On this basis the annual tax rate of California is 74 cents on the $100, which is the exact average state and local tax for the whole country. The intending settler need not fear high taxation.

AGRICULTURAL WEALTH

The Census Bureau appraised California farm lands in 1900 at $708,000,000, and that, of course, would be immensely increased by the subdivision of large tracts and the higher state of development, which increases values. In 1850 there were 872 farms in California, valued, according to the Federal census, at $7,399,000. In the census of 1900 there appear 72,542 farms with a total valuation of $1,163,000,000. Of these farms 76.9 per cent were farmed by the owners of the soil. In 1890 there were 14,000 farms of less than 50 acres in size; in 1900 this number had doubled, and in the last decade—not complete at this writing—the process of subdivision has gone on even more rapidly, and the census will show a remarkable number of small holdings. The number of farms today is estimated at 110,000 and their product, for the most part shipped out of the State, will reach a total of $500,000,000. This means an average product of more than $4,000 to the farm, and does not include consumption by producers. Look at a few items. The average yield of wheat for the last five years has been 12,052,329 bushels. The crop of barley for 1909 is estimated at 31,270,000 bushels. Oats 6,280,000 bushels, corn 1,750,000 bushels. This is not a corn-producing State. We have not formed the corn-growing habit yet. As the feeding season is short, and little hay is stored for winter uses, no statistics of the hay crop are kept; but the product is estimated by the State Board of Trade as worth $32,000,000, the average price being about $10 per ton.

The crop of beet-sugar for 1909 reaches 126,621 tons. Butter 2,500 tons; cheese and condensed milk are large products. Beans exceed 110,000 tons; hops nearly 7,000 tons; wool 16,000,000 pounds and 5,000,000 pounds pulled wool; walnuts 16,000,000 pounds; oranges 34,240 cars; lemons 6,298 cars. Fresh deciduous fruits 15,280 cars, with returns from apples incomplete. Raisins 70,000 tons; prunes 75,000 tons; other cured fruits 44,000 tons; canned fruits 5,000,000 cases; canned vegetables 1,500,000 cases.

OTHER PRODUCTS

The output of gold ranges from $16,000,000 to over $19,000,000 annually. The forest product is about $24,000,000; petroleum for 1909 will yield for crude-oil nearly $40,000,000; the vineyards—wine and grape brandy—about 50,000,000 gallons. Mining has ceased to be speculative and is an established industry, furnishing regular employment to large numbers. The forest wealth is very great and lumbering is a steady business, in which employes earn good wages and often live in their own homes.

Do not imagine that California is chiefly a health resort, a playground for tourists looking for scenery, or a "snap" for rich men owning big ranches or growing oranges as a pastime. She leads all others in the production of barley and beans; is the chief state producing lemons; is without a rival in America or Europe in the volume and quality of her orange crop; supplies deciduous fruits enough to constitute a large factor in national markets; has the United States as a market town for her dried and canned fruits, and is increasing her exports to Europe; furnishes all America with raisins; has driven the French prune out of the American market, and is pressing the foreign market for a leading position; is affecting the prosperity of the wine countries of Europe by her viticultural products; grows figs fine enough and in volume sufficient to supplant the foreign product, and beats Spain and Italy in the quality of her pickled olives and olive-oil; produces more honey than any other State; more walnuts than France; grows asparagus for European cities and winter vegetables for the Middle West and Atlantic Coast cities.

If she does this today, what will she not do tomorrow, when her hundred thousand farms have become a round million?

PRODUCTS AND POPULATION

California offers the widest range of products and maximum of production at the minimum of cost, and it is inevitable that the State will become the home of a great number of people, one class coming for profit, another for health; one chiefly for farms and homes, the other for comfort, and to escape the rigor of Eastern climates. Italy has a population of more than 32,000,000 and an area of 50,000 square miles less than California. Its agriculture in large part is crude and unscientific. California will produce everything that can be grown in Italy, and can multiply its present population by five and not approximate the population per square mile of even the Eastern States.

With great mineral resources, vast wealth of forests and streams; with the greatest ocean commerce which the world has ever known impending on the Pacific, and millions of acres of the finest farm lands in the world unoccupied, one can hardly exaggerate the growth in riches, population and prosperity which will be the portion of this great State during the next quarter of a century.

A LAND OF VALLEYS

Valleys are the homes of the race. They have been from the beginning and will be to the end of time. It is partly a matter of soil, partly a matter of climate. Where "winter and rough weather" make the farmer's life hard, the valley is better than the upland.

Seen from the other side of the continent, California is thought to be a mountainous country. It is. But you can not well have mountains without valleys, and California is big enough to have some good sized ones. Nearly one-half of the tillable land of California is valley land.

A BIT OF TOPOGRAPHY

Look very briefly at the physical features of the State. On the east is the great wall of the Sierra Nevada, from 6,000 to 14,000 feet high. On the west is the lower Coast Range. These ranges start in the north from a common point, breaking out of confused mountain masses and swinging apart until, far down the State, the Tehachapi Mountains stretch an arm across and unite them again. The great valley inclosed is 450 miles long by an average of nearly 40 miles wide. It is one of the great valleys of the world.

The spurs and ridges of the Coast Mountains for another 450 miles shelter a series of valleys from 20 to 100 miles long, while the Sierra Nevada presents a long western slope from 40 to 70 miles wide, full of small valleys, occupied by farms and homes. Behind Mount Shasta, at the north, among the Siskiyou, Salmon and Trinity mountains, are many more mountain valleys, some deeply secluded, but fertile and long since fashioned into farms.

In the south the Coast Range disappears, and back of the long sea-slope lie the fine valleys whose products have made the fame of Southern California. Here are the San Fernando, the San Gabriel, the San Bernardino, and the Los Angeles valleys, and even out on the Colorado Desert are fine valleys, one of them of great extent and all of them of great fertility.

The aggregate of these valleys, in a state celebrated for its majestic mountain scenery, is about 14,000,000 acres of valley land. This warrants us in calling it a farmer's land. And everywhere the mountains fence in and shelter the valleys. The north and northwest winds from the high plateaus are shut out, and the sea winds are modified and diverted by the sprawling ridges of the Coast Mountains. Everywhere these valleys are ideal for homes.

THE HEART OF AN EMPIRE

The central valley of California is big enough to warrant us in pausing a little. Try to get a focal impression of it. Here are in round numbers 10,000,000 acres of land in one body, unbroken in continuity by physical barrier of any kind. It rests at one end on the feet of Mount Shasta; at the other in the lap of the Tehachapi. It sags a little in the middle and is drained from opposite ends by two rivers, which unite and flow into the head of the bay of San Francisco.

Now, here is almost the one valley of the world that has at once a great area, a fertile soil, a superior climate, an abundance of water and a sparse population. In its combination of advantages it stands absolutely alone.

In his report of Irrigation Investigations to the Department of Agriculture in 1901, Doctor Elwood Mead, then Chief of Irrigating Investigations in California, said of this valley: "When one considers the vast area of the Sacramento and San Joaquin valleys, with a surface shaped by Nature for the easy spreading of water, with a soil of great fertility and a marvelous climate, there is no doubt that it is to be a field of great activity." He adds: "The available water-supply for this valley ought to make it the Egypt of the Western Hemisphere."

It is a magnificent heritage imperfectly developed. Its day is now at hand. Nothing can prevent its rapid settlement from now on. It has waited for the settlement of the Middle West; it has waited for the transcontinental railroads; it has waited for the Age of Irrigation; it has waited especially for certain economic changes to come about: for the working out of speculative farming methods and the passing of land monopolies, and it is now ready for the best and highest uses—the only uses which can develop its resources—the cultivation of the soil by farmers who live upon and own the soil they till. Under irrigation and better methods of handling the grain lands, and with the coming of the general farm and the man who owns and tills his own soil, is it not certain that here will be one of the productive and populous regions of the world? Denmark is not so large as this valley by 1,000 square miles, yet has a larger population than the whole State of California, and only 80 per cent of her area is productive. The Netherlands are not so large as this valley by nearly 5,000 square miles, yet have a population of more than five and one-half millions. When the United States has a population in 1925 of 115,000,000, as experts predict, will not some of the surplus millions flow into this valley? Larger than many states, fertile as Holland or the Nile, with the climate of Italy and the products of the Mediterranean countries, is it not certain that here will be a dense population?

It is so certain that merely as an investment, land at present prices and to lie idle has a speculative value. When its advantages are more fully known, is it not beyond question that millions will come here to spend their energies upon the soil? The movement has begun; settlement is now rapid, both at the north and the south. It has required some years to do it, but the tide of immigration and settlement has now been turned strongly to the San Joaquin and Sacramento valleys, and millions of eastern capital are now being invested in these lands and in water to irrigate them.

THE SACRAMENTO VALLEY

We are now to look a little more in detail at the farm lands and conditions which invite the settler. Begin with the Sacramento Valley, the most northern end of the Great Valley, and the smaller. It has an area of about 4,600 square miles, and an acreage of 2,661,120 in the level floor of the valley. It is drained by the Sacramento River, and has substantially the climate of Southern California. Its chief city is Sacramento, the capital of the State.

A SURPRISING FACT

At the same altitude the climate is practically the same in the north as in the south of the State; San Diego in the extreme south, and the country 650 miles north as the crow flies, produce identically the same crops. Do not, therefore, stumble over the word "northern," as if it meant cold. It is here only a geographical term, and has no climatic significance whatever. You can look up out of orange groves to snowy mountains from end to end of the State, and you can find magnolias, camelias and other tropical flowers blossoming out-of-doors, and rare shrubs and plants growing in the dooryards, and palmettos on the streets in many parts of this valley.

There is no country in the world that presents such an anomaly outside of California. It shows a loop of the isothermal lines, or lines of equal temperature, reaching from the extreme south to the head of the Sacramento Valley. If you doubt that surprising statement, the orange groves in this valley are here to attest it; the fig, the olive, the lemon and the date-palm flourish here as in the South. Indeed, the date-palm ripens its fruit year by year at one point in this valley, and investigation shows no other place in the world where the date ripens its fruit so far north.

Settle this in your mind at the very outset, that the same general climatic conditions exist in this valley as are found in Central and Southern California. This is a country not subject to the general law, and the proof of it is the successful culture of citrus fruits along the whole eastern border of the valley.

GENERAL FEATURES

In this great valley there are broad rivers providing water transportation and a comprehensive system of drainage; tributary forests and mines of great value; 26,000 square miles of territory lying between the summits of the two mountain ranges, all rich in natural resources; fertile lands, mountain forests of sugar pine, abundant water, valuable minerals—gold, silver, copper, lime and clay, mineral oil and asbestos—and these splendid resources all accessible to the very summit of the Sierra.

In the valley proper the lands are free from brush or stone, are level and ready for the plow. There is no timber in the lowlands save the growth of willow and cottonwood, but the lands on the east side have scattered groves of oak, giving a park-like aspect to the landscape. The rolling hill-lands have scattered growths of scrub oak and shrubs of several kinds. The great body of agricultural land of the valley is not overflowed; some of the river-bottoms are exposed to flood-waters, but save at long intervals and in the lower valley, are secure behind levees.

That it was a land of unusual attraction was evidenced at an early day by the location of great ranches,

WHERE MOUNTAINS AND VALLEYS MEET

and in our day by the selection, by the Government, of grounds for a Plant Introduction Garden, and by the State for a University Farm as a feature of the State Agricultural College. But the available lands for farms show for themselves, as they are not part of a wilderness; they lie side by side with improved lands, and in the midst of established communities. Towns may be farther apart than in the older regions of the East, but they are in all the valley, with churches, schools, telephones, trolley lines and regular trains which cover both sides of the valley.

SOILS AND PRODUCTS

Much of the valley was once an arm of the sea, and all of it is sedimentary. Generally the soil has great depth, and is very rich and productive. That it is not all equally good soil need not be said. It never is in any country. Good soils, rich soils, soils of almost incredible depth, are the rule. The valley was laid out on a generous scale, and some waste land was thrown in for good measure, but it is simple truth to say that continuous bodies of the best farm land to be found in any country here embrace whole counties, and the waste land is relatively small.

The prevalent soils are loams; there is some adobe—this being a Spanish-Californian term for a heavy clay soil. As a rule adobe soils are rich and durable, and the black adobe of the east side is easily tilled. The new settler will look doubtfully at some of the reddish tinted soils of the east side, and at the red foothill soil. But these soils are very fertile and well drained, and where cut into by streams the reddish plain loam is to be seen from six to ten feet deep and then underlaid by gravelly sub-strata.

On the west side of the river are wide areas of sedimentary soils, and in the lower end of the valley these are of pre-eminent fertility. They are a mixture of soil material of volcanic origin from the Coast Range and of the finest natural sediments of the streams and the river itself.

But we need not point out the best soil areas. The average farmer knows when he sees them, and here as usual the closest settlements occupy the regions of fertile soil. But they do not ''possess the land;'' there is room for 10,000 more farms, and a promise of prosperity in every acre.

The chief products are grains, hay and fruits, stock raising and the dairy. Many table-grapes are grown. Near the river are many peach orchards, the industry being extensive and profitable. Oranges are extensively grown about Sacramento city, around Penryn, Oroville, Palermo and Corning. Sugar-beets are a valuable farm product, maturing early, free from frost and from rain when storing up saccharine, yielding heavily and leaving the land in good condition if properly rotated. Rice is successfully grown, and will become a staple crop. It is very profitable.

But products need not be dwelt upon. ''Everything grows.'' This is almost literally true, and this is in itself the most persuasive fact we could present. It is simply true that ''as an agricultural state California stands alone,'' and the heart of its agriculture is here in this wide valley.

RAINFALL AND IRRIGATION

The rainfall ranges from 18 inches in the lower valley to 34 in the upper. Now, if you think of California as a ''dry'' country, and if you ''shy'' at irrigation, this greater rainfall may please you. The winter rainfall is sufficient, with care and thorough cultivation, to mature many crops, and it is only fair to say that the natural conditions favor success rather than failure for a certain narrow range of farm life.

Summer rains are not in the calendar. This is an advantage to the hay and grain farmer and to the fruit-grower, but it is an obstacle in the way of diversified crop production. This is so clearly the case that the irrigated area is everywhere spreading. Small farming, that is, intensive culture, is wholly dependent upon irrigation.

There are various systems of irrigation in operation, and others building. That at Orland, in Glenn County, built by the United States Reclamation Service, covers 14,000 acres. This is but the initial step in a great plan for irrigating the valley and controlling the river by great storage reservoirs and by canals down each margin of the valley, as we have elsewhere pointed out. This plan may not be carried out for years, but meanwhile, private systems, built or building, will cover several hundred thousand acres, as the Feather River Canal, the Butte County Canal, the Central Canal, the Yolo Consolidated, and others. The Central Canal is being extended and it is only a question of a few years when the 75,000 acres now irrigated will amount to twenty times that acreage under private enterprise. So that the settler coming here will find irrigation the rule and should be by conviction an irrigationist, ready to fall in with a movement which is not an experiment, but the outgrowth of experience, and a condition established by the nature of things, in the imperfect distribution of the rainfall.

MARSH AND DELTA LANDS

There are some salt marsh lands and some overflowed lands which yield summer pasture, but no typical swamp lands. Not waiting for the working out of Government plans, 40,000 acres of these overflowed lands are now being reclaimed in three counties, and a tract of 60,000 additional acres has been purchased for reclamation. Another project contemplates the reclamation of practically the whole of Sutter Basin, comprising 100,000 acres, and still another company has bought 35,000 acres in the Yolo Basin for reclamation. These lands are worth about $25; reclaimed, they will pay interest on a valuation of $200 an acre.

A feature of the lower valley is the islands of the Sacramento, and the delta lands which border the river for many miles. Here are perhaps 250,000 acres of the most fertile land imaginable. A general movement is now organized to widen the mouth of the Sacramento, which is constricted by a spur of hills where it flows into the bay. The outlook now is that the State and the

General Government will aid by an appropriation from each of $400,000, the citizens most interested adding a large fund.

The final outcome of all this will be one of the most beautiful, as it is now one of the most promising valleys of the world. Here is beauty of situation, charm of climate, fertility of soil, wealth of water. The farmer has at hand all the conditions of successful farm life. No words can exaggerate the charm of this region, nor overstate the promise of it. Population and development will greatly enhance the value of these valley lands, and make investments profitable. Separated only by an imaginary line the Sacramento and the San Joaquin valleys form the great inland valley of the State.

THE SAN JOAQUIN VALLEY

The San Joaquin Valley is a vast plain, oval in shape, two hundred miles long, with an average breadth of sixty miles; situated about fifty miles inland from the Pacific, in the center of California. The San Joaquin Valley is surrounded, excepting on its northern boundary, by mountains. The flanking mountain ranges extend along lines that are parallel or concentric with the coast. At the southern end of the valley the chains converge and unite. A line drawn along the northern end of the valley, if extended east and west, would pass through or near San Francisco, Richmond, Va., Gibraltar, Athens and Smyrna. The southern boundary is on a parallel that runs close to Nashville, Tangier, Damascus, Bagdad and Osaka. This briefly indicates the topography and geographical location of the San Joaquin Valley.

It would be interesting to relate what is known and conjectured regarding the making of this area. In its geological disclosures, the territory is full of interest. This story, however, is too long. Its story is one of rapid and surprising transformation. In its pristine condition it disclosed some unattractive aspects, being, in part, an arid land unvisited by rain during several months of every year. Variety of topography and anomalous climatic conditions are marked characteristics of this valley and its surrounding mountains. Probably its most impressive aspect is the one of vastness, or extent of level area.

The range of mountains that flanks the valley on the east, has a remarkable influence over all local conditions. Approaching this range, the level plain is first interrupted along its eastern rim, by slight undulations, varying just enough to be perceptible. The contours increase gradually and merge into low, rolling hills. Like most of the plain, these hills are bare except for grasses and native herbage. Sparse, low growing shrubbery is found along small channels where streams flow during part of the year. The approach and changes are so gradual that the observer is hardly aware of them until he is among higher hills with long graceful contours, increasing in ruggedness with ever increasing height. Occasionally appears a flat topped table mountain, extending promontory like into the landscape of rounded hills. Irregular patches of scrub oak and chaparral brush appear on slopes and hillcrests. This is the region known as the foothills. Still farther on, the country becomes more broken. Brook runs and ravines deepen into canyons; and these, in turn, broaden into small valleys, where sycamore, cottonwood, laurel, ash and willow trees mark the courses of streams. Broader valleys are dotted with large picturesque oaks. Surrounding these valleys, higher ridges rise with increasing abruptness and greater density of tree growth. Outcroppings of gray granite begin to disclose the foundations of mighty mountains. Above and beyond, in the distance to the east, is a series of dark blue ridges indicating vast bodies of big timber. Occasionally the blue line dips abruptly where the ridges are parted by a deep canyon through which a high heading river has its course. This forest region comprises an extensive area of picturesque mountains, clothed in sylvan verdure up to an altitude of ten thousand feet. From any eminence within this area we look across richly wooded ranges or down into emerald meadows ribboned with streams. From the midst of this setting and towering above it rises the great range, an overawing chaos of granite. Domes, peaks and pinnacles rise in fantastic confusion. Higher crests thrust serrated masses of rock into the sky over fourteen thousand feet above the sea. At intervals of twenty to thirty miles, the granite range is split transversely. Some inconceivable dynamic power has forced its way through cubic miles of rock, delving abysmal chasms six thousand feet deep and baring granite cliffs to their foundations. Into these gulfs dash the waters from higher regions. Snow fed floods of mighty volume pitch over precipitous walls and are atomized in their plunges to lower levels. Where these waters have their sources, winter persists almost perpetually. Snow and glacial ice remain always in the shadowed recesses of the higher range. During winter months, this entire mountain area, from timber region to summits, is one vast white silence. This is the Sierra Nevada (Snowy Range), the mountain barrier that borders the great inland valley on the east throughout its entire length.

To revert to reasons is unnecessary; the fact in itself is sufficient: the Sierra Nevada exerts a remarkable influence over climatic conditions. The territory that lies to the west, between the great range and the sea, is blessed with a bland, equable climate, the like of which is not found elsewhere within the temperate zones of the world. To the east of the range, up its precipitous eastern slopes, and for a distance over the summits and down the western side, winter dominates; and here, its most severe manifestations culminate. As if spent in a final, mighty effort, the elements, met by the warm breath that flows landward from the Pacific, are checked and finally vanquished. While these winter demonstrations are at their height within the alpine regions of the range, oranges ripen in the thermal foothill belt at its base. In the valley, fruit trees blossom and spring verdure decks the fields.

Across the great valley, sixty miles to the west, rises the Mt. Diablo Range which is a long spur of the coast chain of mountains. This range is the western boundary of the valley. In all of its aspects this western range differs from the Sierra Nevada. Its extreme altitude is not over five thousand feet. On its eastern slope, as seen from the valley, there is a noticeable absence of timber. The hills are undulating rather than precipitous. The most marked difference, however, is the absence of steadily flowing streams. There are creeks that rise suddenly and run torrents while fed by seasonal rains. These subside just as suddenly, and entirely, when the rains cease. Toward the south, the Sierra Nevada and Coast Ranges converge and unite forming a crescent-shaped chain that embraces the upper or southern end of the San Joaquin, separating it from that portion of the State designated as Southern California.

Within this description, there is one vital factor of greatest importance, a factor without which this valley could never have become a great productive area. Heading in the high ranges of the Sierra Nevada, having their sources within the remote regions of eternal snow, are rivers that flow into the valley, debouching on to the plains at points from thirty to forty miles apart. These six rivers of the south comprise one great system, the main drainage channel of which is the San Joaquin River. To the south of the San Joaquin, Kings River is the only stream the waters of which reach, and form a part of this system. To the north, the Merced, Tuolumne, Stanislaus and Mokelumne all empty into the San Joaquin, which flows to the bay of San Francisco, and to the sea. During the season of rainfall these streams carry volumes of water drained from lower hill areas of the Sierra Nevada Range. While in the north the Sacramento River, with its numerous tributaries, forms the great drainage and water-way system of that portion commonly designated as the Sacramento Valley. Were these the sole water resources, the streams would be dry soon after the rains stopped. When the valley and lower hill regions are visited by rains, the higher mountains accumulate snow. With the coming of spring, the rains are done, but in the deep gorges and timber belts of the mountains snow has been falling, settling and solidifying all winter. Stored and held in these higher regions are nearly six thousand square miles of snow and ice upon which Nature does not draw until the beginning of the arid summer season. As summer's warmth creeps up the range, the vast accumulations of snow are gradually melted. The waters flow through the channels of the rivers to San Francisco Bay. Thus is brought to the valley, during its season of no rain, an abundance of needed water. Within this condition is found the one potential reason why the great inland valley is created an abiding place for people.

HISTORICAL

Let us picture the valley at a time when the waters of the six rivers flowed uninterrupted to the sea; at the season when the rains are about over. Throughout the vast area no plow has yet disturbed the land. So far as the eye can see there is an expanse of green plains, flanked on the west by purple and emerald hills; on the east by blue and white mountains. Splashes of vivid wild-flower colors enrich the level green stretches. In no country of the world is nature's tribute to spring more gorgeous. As the season advances and the rain-given moisture evaporates from the earth, the verdure ripens. Very soon the brown and yellow hues of mature, unwatered vegetation prevail. Long, distant lines of dark timber mark the rivers where water oaks, sycamore and willows thrive in the moist areas. The broad expanses between the rivers are treeless, brown, dusty and dead; and so they remain until the revivifying rains come again. This was the San Joaquin Valley before the first white man saw it; and so it remained for several years after the coming of white men; for the first white man did not come seeking lands. Gold was the lure. True it is that a few, widely scattered settlers knew this land before gold was discovered. Some farming was done in localities where moisture seeped from rivers. Cattle were pastured on the plains during the green season, and in the river bottoms during the dry period. The early Mexican settlers from the Coast Country, knew the value of the river lands and sought, before California became a part of the United States, to acquire large tracts by grant from the Mexican Government. The native Indians, who were here before all the rest, built their villages of brush or tule huts near the rivers. To all these people, and to the thousands who came later to dig gold, the potential possibilities of the valley remained, for a long time, unknown. When gold was discovered and people came in numbers, their work was in the hills. The settlements were not in the valley proper. As interest in mining began to wane, some provident people turned toward the land. Before long a second and greater discovery was made. It was found that this arid land needed but one element to make it perennially productive; that one element was water available during the arid season. The waters of six rivers ran uninterrupted to the sea. The diversion and distribution of these waters were the only remaining problems. Irrigation had its beginnings. In the meantime, increasing numbers of people became interested in agriculture, and wheat growing became the prevailing industry. Grain crops were sown to mature under the influence of seasonal rains. Uncertainty of results, impoverishment of soil through lax farming methods and continual cropping, together with the demonstrations made on watered lands, all urged the necessity of irrigation. With persistent enterprise, the first canals to be constructed were enlarged and extended. Wherever the water came, grain was superseded by more valuable production. Every year demonstrated adaptability of new and valuable crops. Variety of production seemed to be unlimited. Specialization in many varieties resulted in remarkable quality and surprising quantity. A few years of farming under irrigation fixed the destiny of this great valley.

Such, briefly, is the history of the transformation of this valley. About forty-four years have passed since the first irrigation canals were constructed. During this period development and extension of irrigation have been going on steadily. Water from each of the rivers has been diverted into canal systems. At the present time over one million acres of land are served with water from these streams. Rude dams and headworks that served during earlier years have been replaced by modern structures of concrete and masonry. This work has ben done economically. The cost of original water rights has been, comparatively, very low, and the annual maintenance cost correspondingly low. Underflow from the Sierra Nevada, together with the use of river water for irrigation, creates a ground supply that has been and is constantly being tapped by wells, from which water flows by hydrostatic pressure, or is pumped by electric or gas-engine power. Probably there is no other equal area within which Nature has provided a more abundant, or more conveniently distributed irrigation supply. The great inland valley stands today as an example to the world in the development and scientific use of irrigation.

CLIMATE

In considering the climatic conditions that prevail in this inland valley we beg leave to suggest to those who are unacquainted with California—please discard most of your previous experience. Nature, in California, disregards many rules that are, elsewhere, regarded as fixed. North and South, as terms of geographical direction, are respected here, as elsewhere. Climatically, these terms are entirely without honor. At the southern end of the San Joaquin Valley and at its northern boundary, likewise at a point, in the interior of the State, two hundred miles north of that boundary, climatic conditions are practically the same. Go, however, from the sea coast east, across the Coast Range and across the valley to the summits of the Sierra Nevada, and nearly every sort of climate, from sub-tropic to arctic, will be encountered. The country to the west of the Coast Range possesses a delightfully equable climate. Over this range, in the

GRAIN FIELDS—THE FOUNDATION OF CALIFORNIA'S SUCCESS

SOUTHERN CALIFORNIA SCHOOL
OF THEOLOGY LIBRARY

San Joaquin, there are wider ranges between the extremes of heat and cold. There is also noticeable absence of dampness that prevails along every sea coast. Very low percentages of humidity, especially during the summer months, characterize the climate of the valley. With increasing altitudes in the Sierra Nevada, there are correspondingly increasing lower ranges of temperature, and increasing divergence between the temperatures of day and night. In the higher altitudes temperatures drop below freezing every night. During July, August and September, mid-day temperatures in the San Joaquin Valley range high. It is, however, interesting to note that increasing temperatures are nearly always accompanied by decreasing percentages of humidity. Perceptible heat is, therefore, very much less than that indicated by the thermometer. Men and animals perform the heaviest of farm work in the fields throughout the hottest months of the year, entirely secure from the dangers that prevail in humid climates. Nights are refreshing; especially so to those who sleep out of doors in the cool dry air. As for the winters in the valley, severe cold is unknown. There are occasional frosts at night; sufficient to drive sap toward the roots of fruit trees and vines during their brief period of dormancy. The foothills that border the valley on its eastern rim are remarkably free from frost. This region, including both the Sacramento and San Joaquin valleys, is known as the thermal belt. Within this belt sub-tropical fruits thrive. Oranges ripen and are harvested during November, December and January. Toward the end of February or first of March, almonds and apricots blossom throughout the valley, followed closely by all the other fruit trees.

RAINFALL

The period from October to April includes the usual rainy season. The actual period of rains varies slightly in duration with different years. It should not be supposed, however, that rains continue steadily during this season. Occasionally there may be a week or more during which rainy weather may prevail. For the most part, duration of rain is from one to three days. Frequently the rains come at night, followed by days of bright sunshine. In the center of the valley the average annual rainfall is about nine inches. Between the center and northern boundary the average increases gradually but perceptibly. With increasing altitude in the Sierra Nevada there is greatly increasing precipitation. Generally, the weather between rains is delightful. Especially is this true during the California spring which begins in February. The long period of drought during summer and fall makes possible the production of many valuable crops that otherwise, could not be made. Dried fruits and raisins are cured in the open sunshine. Crops of alfalfa hay are cut and cured, and grain is harvested without danger of damage. Figs, grapes, olives, oranges and other fruits that like a warm, dry climate thrive and mature to perfection. Building construction in fact any out of door work can be planned and carried out without interruption or delay on account of weather. Electrical storms are not frequent. Tornadoes or cyclones are unknown.

WINTER

The annual dormant period of plant life is very short. Animals are not housed up during the winter. They feed in open pastures and continue to increase in weight. In no occupations are human activities circumscribed by long periods of enforced idleness on account of weather. The climate of California is unsurpassed. It offers advantages not to be found elsewhere. People who live in the two great inland valleys enjoy California climate which means, all conditions considered, from season to season, and from year to year, more bodily comfort and less hardship than are found in most other parts of the world. The mountains or the sea coast are easily reached from any point in the valley. If temporary change is desired, it may be had in an infinite number of attractive ways.

IRRIGATIONAL PROGRESS

Since the beginning of irrigation development the great inland valley of the State has been attracting people; people of foresighted judgment who have sought for themselves and their dependents the best that could be found. Following the period when wheat growing was a prime agricultural pursuit several enterprising individuals began ventures in the culture of fruits and grapes. Many of these efforts were on a large scale. Experience soon demonstrated a valuable fact. Soil and climatic conditions were such that with control of moisture and careful cultural methods a small piece of land could be made to yield large results. Since the demonstration of this fact, there has been a steady influx of people who have sought small farms. Large tracts within reach of canals were subdivided and taken by settlers in 10-, 20- and 40-acre pieces. This practice is responsible for the terms ''Colonies'' or ''Colony Tracts'' in use throughout the irrigated areas of California. The era of colonization began shortly after the first railroad was constructed through the valley. To be precise, it began in Fresno County where the first diversion of water from Kings River was accomplished. As the boundaries of irrigation development were reached by settlement, canals were extended. Success followed earlier efforts and the diversion of water from other rivers was undertaken. Every district brought under irrigation attracted settlers. One after another the irrigation enterprises of this valley have become factors in progress and increase of population. Profitable production begat wealth and commerce. Towns that were but tank stations grew to be cities and more towns sprung up. It has been a great transformation, typical of a western country possessing the potential attributes that attract the highest types of humanity. In the years of progress there has existed a spirit of helpful enterprise. People have labored for profits as people always will. There have been many who at personal sacrifice of time and money, have accomplished much for the common good. Kindly and helpful natural environment has permitted development along

THE GRAIN FIELDS TRANSFORMED

such varied lines that today, in variety and quality of agricultural and horticultural production the San Joaquin Valley stands unsurpassed. Enumeration may be tedious but we may venture some contrasting examples.

CROPS

The deciduous varieties of fruits common to northern, semi-frigid climates grow side by side with such subtropical varieties as the orange, grape fruit, and lemon, the fig of Smyrna and the olive of Palestine. Vines from Spain, France and Italy find a home environment together with those native to our northern states. Cereal crops of Egypt and our native Indian corn thrive in adjoining fields. The palm, acacia and eucalyptus thrive together with the elm, maple and cone bearing trees, indigenous to alpine and far northern regions. Horticultural authorities have stated that the valley produces all the known fruits of the world, excepting those of the mild tropics. The catalogs of nurserymen enumerate adapted importations from Japan, China, India, Persia, Turkey, Russia, Australia, Africa and all the European lands. Plant life from wintry climes seems to benefit by transferrence to this climate, as do people. The reason for extraordinary growth and productivity of trees and vines and the early maturing of fruit in this valley is found in the fact of large annual percentages of clear unobstructed sunlight. Water vapor in the atmosphere lessens actinic value of the sun's rays. Hence in humid climates plant growth and perfect maturing of fruitage are retarded. In evidence of this fact we have a seeming climatic paradox. Citrus fruits ripen in this valley from four to six weeks earlier than at points near the coast, two hundred to three hundred miles south. In the realm of purely agricultural production we find the same wide diversity. While large areas within irrigated districts are taken up by trees and vines there is yet a great deal of land used for grain. All of the commonly known cereal crops are grown extensively. Dry farming is practiced a great deal but results are problematical, depending upon the amount and distribution of annual rainfall. Such crops as Indian corn, Egyptian corn, Kaffir corn, Egyptian wheat, rice and nearly every known variety of edible beans are irrigated and produced in perfection. Alfalfa is the great forage crop. It grows luxuriantly, yielding heavy tonnage per acre. With widespread production of alfalfa, dairying has grown to be a prominent and very profitable industry throughout the valley. Vegetables in every known variety are grown, and fresh vegetables are had the year through. Aside from the wealth of agriculture and horticulture, lumbering is a prominent industry in the mountain regions. At many points flumes sixty to seventy-five miles long convey rough dimension lumber from mountain saw-mills to mills at transportation points in the valley. In the lower mountains and hills of the Sierra Nevada there are mines yet being profitably operated. Modern methods have made it possible to resume work in ground that was abandoned in the old days. Throughout the mountains there are vast deposits of baser metals that will, beyond doubt, be utilized at some time. One of the greatest sources of wealth has resulted from the development of mineral oil. Located at Coalinga in the southwestern part and extending several miles along the base of the Coast Range, is one of the greatest producing oil fields of the world. The value of the annual production of crude oil in this field, exclusive of by-products, is about $10,000,000, outstripping that of any other single commodity produced in the valley. The production of great quantities of cheap fuel has revolutionized power generating systems and stimulated manufacturing throughout the Pacific Coast. To the foregoing list of diverse production may be added granite of exceptionally fine quality, as well as sandstone and other building stones.

SAN JOAQUIN VALLEY

The great inland valley is one immense valley extending some 500 miles from Mt. Shasta on the north to Tehachapi on the south. The northern half, drained by the Sacramento River, is known as the Sacramento Valley, and that portion drained by the San Joaquin River is known as the San Joaquin Valley.

In its relative geographical position, the San Joaquin Valley is fortunately situated. It occupies the center of California and lies between the two great centers of population in the State. San Francisco and adjacent territories about San Francisco Bay, have now a population of a million people. Los Angeles, city and county, together with cities of the south, have nearly as many more. In both of these localities, population is increasing rapidly. The local population of the valley is increasing in equally rapid ratio. There is therefore a constantly increasing demand for the commodities produced. For example: in the distribution of dairy produce, aside from that which is taken locally, the product from the southern half of the valley, goes to Los Angeles; that from the northern half, to San Francisco. Either of these places would gladly take the entire valley output. So it is, also, with many other of the staple food commodities. The valley has not, as yet, produced volume sufficient to fill the immediate demand. With a large territory of proven adaptability, it is indicated that there is room for many more people to engage profitably in the production of these commodities, for which there is an ever increasing demand. Of course, this condition exists for staple food products. With green and dried fruits, table grapes, raisins and wines, the world is our market. The Panama Canal has already accelerated demand by reason of facility in shipments to remote points. Local transportation facilities are adequate. Besides two transcontinental lines of railway and numerous lateral lines, the valley has tidewater connection with San Francisco Bay through the city of Stockton. Here, then, is an easily accessible portion of the earth's surface that offers the widest diversity of promising opportunity and, as yet, uncrowded. With a population of about three hundred thousand, this territory produces and sells annually close to $150,000,000 worth of commodity. Its area is about equal to that of Italy, which has a population of over thirty millions.

Considered generally, manufacturing has not, as yet, reached a prominent place in the industries of the valley. It has not kept quite up to the pace of increase in population and local demand. The city of Stockton is one of the principal manufacturing points in the State. Here are located some extensive plants making harvesting machinery, agricultural implements, traction engines, pumping and dredging machinery. There are throughout the valley, packing houses, canneries and wineries. These are especially prominent in Fresno and Kings counties where the bulk of dried fruits and raisins are handled. Creameries are numerous and very generally distributed throughout the valley. Stanislaus County leads the other counties of the State in butter production; while Merced, Madera, Fresno, Kings and San Joaquin counties are among the heaviest dairy producers in the State. In totality, the production within the eight associated counties of the valley, amounts to three-fifths of the entire production of California.

The development of hydro-electric power has become an important factor in the material progress of the valley. Herein the snow-fed rivers from the Sierra Nevada, come again into prominence. At power stations located on these rivers that are a part of the San Joaquin drainage system, there is generated and transmitted about 70,000 horse power. But a small part of the available water power has been utilized. The rest remains to be developed as may meet the needs of an area within distances of possible transmission.

SOCIAL CONDITIONS AND SCHOOLS

In its social organism, the San Joaquin Valley is made up of ranches, rural communities, colonies, villages, towns and cities. The list is given in the chronological order of the valley's growth. From the least unit to the largest aggregate, all enjoy modern conditions. The telephone and rural mail delivery are adjuncts to nearly all country homes. A great many have, also, electric power and lighting facilities. The automobile has over-

DELTA LANDS AND THE FOOTHILLS

come isolation which was formerly an objection to rural residence. It is indicated by the number of automobiles in use, that the people of the San Joaquin Valley appreciate the value of these machines, and, fortunately, can afford to use them. These people work. When it is demanded of them, they work hard. In the time that they devote to work, they are not interrupted by hampering natural conditions. They know that industry in the right direction will bring a sure reward. Their reward consists of better pecuniary returns, less hardship and more comfortable leisure, than can be had in less favored localities.

The public school system of the valley is the best that modern knowledge and methods can devise. No effort nor money are spared in bringing the schools, both country and city, up to the highest standard. The courses afford complete preparation for college. High school pupils are admitted to the University of California (one of the largest in the world) upon accredited scholarship. Public library systems are extended from centers to county seats, to cover rural districts throughout the counties.

A main concrete paved highway has been constructed through the length of both valleys. A complete system of roads connecting all points with this main highway is assured. In several localities this collateral system has been provided.

Practical and material conditions, utilities, public and individual welfare, are of first importance in the consideration of any country. We would be negligent, however, if we stopped here in this description. No locality possessing only workaday conditions, can be regarded as ideally attractive. Recreation is essential to happiness. A country that requires of its people constant practical effort, except during periods of enforced idleness, is not an attractive place to live. In proportion to the time required for normal accomplishment, the people of these valleys can afford more leisure than is ordinarily possible in many other localities. With this possibility, there are extraordinary opportunities for recreation. If one, in a country district, tires of quietude, the attractions of cosmopolitan cities are within easy reach. The hunter or the angler may find the best of sport close at hand. To the lover of scenic grandeurs, the Sierra Nevada is a wonderland unexcelled in the world. Among these mountains are nature wonders, wholly unique, that in so far as known, do not exist anywhere else. Here, on the western slopes of the range, at altitudes of from five thousand to seven thousand feet, the giant Sequoia trees grow—trees that are over thirty feet in diameter and over three hundred feet high—trees that scientists declare are the oldest living things on earth. In the heart of the Sierra is Yosemite, Nature's supreme marvel of sculptured architecture; a wonderland where stupendous miracles in granite are combined with meadow gardens of blossoming verdure. Here are the highest waterfalls in the world. Here thousands of people find, every year, rest and recuperation. Yosemite is the grand canyon of the Merced River. The Tuolumne flows through Hetch-Hetchy, another of the great gorges of the Sierra. The San Joaquin River has its sources among mountains fourteen thousand feet high. The canyon of Kings River and the region about it, rivals anything else in the world in precipitous heights and depths of granite rocks and in magnificent forests. The sea coast of California, with its beautiful beaches and numerous resorts, offers attractions that draw thousands every year. All of these things are easily accessible from the San Joaquin Valley; and all of these things are enjoyed by its people.

SETTLERS NEEDED

The unoccupied spaces in this valley, surrounded by helpful natural environment, and all that has been added by progress and development, are awaiting the coming of more people. There will be found here opportunity for human activity in manifold diverse fields. The present age is one of strenuous endeavor. In every land and every life there are obstacles to overcome. The people who live in the great valley believe that they encounter here fewer obstacles and more benefits than they have found elsewhere. They believe that it is a good place to live.

The foregoing description is intended to be general in its scope. Specific localities are mentioned, but only as they are related to the entire valley. No attempt has been made to go into details regarding specific localities as to their special adaptabilities or opportunities. The earnest inquirer, contemplating residence in the great inland valley, will wish to know in detail what opportunities there may be in the different localities and in the different lines of industry that are possible within these localities. Each county that is an integral part of the Valley Counties Association has prepared books setting forth in detail the results obtained through actual practice in the different industries of their localities. Within these books will be found figures covering average and specific individual returns and results. These books are designed to furnish detailed information to any who may become interested in the valley as a place of opportunity. In so far as it is possible to depict, by word and picture, the actual existing conditions, these books are most valuable to the investigating inquirer.

It is hoped, however, that the people who become interested in the Sacramento or the San Joaquin Valley and who are impelled to investigate it as a possible place of residence, will go farther than the reading of descriptive matter.

Every effort has been made to convey an impression based upon the actual conditions. The investigator will find, however, that no written description can fully convey the impressiveness of this great valley and its resources. A personal visit with sufficient time for observation, will be the most satisfying method of investigation.

THE EASTERN SHORE

For convenience now this coast country may be made to include the east side of the bay, Contra Costa and Alameda counties. Contra Costa means "over against the coast," and fronts the bay shore down nearly to Berkeley. It has many small delightful valleys, and, like Alameda County, is closely related to the market center of the State. These two counties have an exceptionally fine climate and much very rich soil. It is a region destined to become the kitchen garden of the bay cities, and will justify the high prices at which some of the farm lands are already held. Alameda has the extensive Livermore Valley, and nearer in toward the bay a wide alluvial region very attractive to the truck-farmer and the orchardist. Much land down the east shore of the bay is yet to be reclaimed from the tides and made productive, but the two counties mentioned might well have a chapter, so important are they in location and in soil, climate and productions. The settler will find no more attractive counties in the State, not even in Southern California, in point of climate, and none more promising. Alameda County has Oakland and Berkeley for its chief cities, and its situation will make the whole county a suburb full of the country homes of those who do business in the bay cities.

Contra Costa has a long bay frontage and is developing manufacturing industries of many kinds.

SAN MATEO COUNTY

This is first traversed as we go south from San Francisco, a region so close to the city yet so quiet and parklike that it was early pre-empted for palatial country homes. It is a region of great beauty and a place for residence rather than for farms. It is full of growing towns.

SANTA CLARA VALLEY

This is sometimes called the richest valley in California. Its proximity to San Francisco, its fine climate and rich soil, made it a favored region from the first. It begins well up toward the city limits, lying along the lower arm of the bay and widening as we go south. It is sheltered continuously by mountain ridges from ocean winds, and is free from excessive heat in summer and from low temperatures in winter. The valley is about 70 miles long, and has an average width of nearly 15 miles. The soil is dark, often black, loamy, in places gravelly, and is very productive. It is drained by a number of streams, which have a diminished flow in summer, the smaller ones disappearing, sinking as they approach the valley. This augments the subterranean supply, and artesian wells are numerous all over the valley at from 60 to 100 feet.

The seed farms of this valley add to its beauty, making it resemble a Persian carpet of many colors when the flower fields are in bloom.

Flower and vegetable seed-growing have steadily increased its acreage until now the Eastern seed houses are largely supplied from this State. The seeds are ripened under climatic conditions which give them perfect vitality.

The chief interest of the valley is fruit, and it is better known perhaps for its prunes than for the Lick Observatory or the Stanford University. Its great orchard wealth makes it a delightful place of residence, and its Blossom Festival shows the visitor from one point 125 square miles of bloom. San Jose is the chief city.

SANTA CRUZ COUNTY

West of the Santa Clara Valley is Santa Cruz County, across the Santa Cruz Mountains. It is a small county, 40 miles long by about half as wide, with a curving shore corresponding to the curve of the mountain line. Its valleys are rich, its average rainfall 25 inches, and its climate remarkable for its evenness. The wide, high, grassy plateaus near the coast constitute fine grazing and dairy lands, and the county produces hay, grain, potatoes, the whole range of cereals, all kinds of fruit, including the lemon, and fine grapes and small fruits. The apple grown in the little Pajaro Valley is superior. It is commonly said that this is not an apple country, but the best proof is the apple itself. The Bellflower and Newtown Pippins from this little valley go to Germany, England, Scotland, South Africa and Australia. The Pajaro Valley has but 45,000 acres, but exports an average of nearly 4,000 cars of apples a year. The fogs and sea winds, which come in across Monterey Bay make the climate for the apple, and soil cultivation do the rest. Crops are generally sold on the trees before maturing. Vast quantities of berries are also grown here.

SAN BENITO COUNTY

Across another ridge of mountains to the east lies the sheltered county of San Benito, having two fine valleys, the Hollister and the San Juan. The first is really a continuation of the Santa Clara Valley. The soil is moist, a deep, rich alluvium or sediment, light and loamy, and there are perhaps 20,000 acres in this one valley. The San Juan Valley was early settled, and is rich in soil and delightful in the temper of its seasons. The county raises grain, hay, fruit and garden seeds. Great seed farms, as noted elsewhere, are found in these coast valleys, which supply the large houses of the East. Thousands of acres here grow vegetable and flower seeds.

The county is remarkable for the quality and volume of its hay, and, fittingly, is now raising good stock, and deeply engaged in making butter and cheese, and in planting orchards and vineyards. It is a good country.

THE SALINAS VALLEY

Going back to the main line, we are in the Salinas Valley, a long, fertile valley of 100 miles and having about 550,000 acres. A great wheat field once, to wheat is now added barley, and to barley fields the dairy and general farm. Sugar-beets are largely grown, and potatoes and hay. Grain is still a large product. The rainfall is from 15 to 18 inches, irrigation is feasible for much of the land, but dependence is chiefly upon the clouds; irrigation is increasing, but land is held in large tracts, and there are many renters. Money is made in grain when conditions are favorable, and the table lands will long be given to cereals, but the black soils of the valley will presently be given to better crops and farmed in a better way. Fruits do well in many places; part of the wonderful apple valley of Pajaro is in this county, and hardly separable from this valley. There are rich farms, schools, churches, villages, the prosperous county-seat of Salinas, good transporation facilities and ready access to good markets. Few regions of the State offer better opportunities for the settler than the rich Salinas Valley. The great Del Monte Hotel is in this region, and Monterey, Pacific Grove and Carmel-by-the-Sea are resort towns with the most equable of climates and great beauty of situation.

SAN LUIS OBISPO COUNTY

This, The Garden of the Bishop, is what the county of San Luis Obispo has been called, being the seat of one of the old Missions. It is a region of vast grain fields, big stock ranches, fine dairies and increasing orchards. The valleys are small, mere pockets in the hills, save the upper Salinas, which is a large basin rising into rolling hill lands and plains. Much of it is an oak park, and very beautiful, but not suited for small farms. It is a land of summer-fallow, where grain is grown and the farmer requires a good acreage. But the lands are low in price and the climate superior.

On the coast side of the mountains is a stretch of 80 miles of fine dairy land, the region being rich in native grasses. These are nourished by the sea mists and heavy rainfall of the immediate coast. Wharves and landings admit trading steamers, which take off all the surplus produce.

There is much mineral wealth in the county, and pipe-lines from the great oil districts of the San Joaquin Valley and from the Santa Maria Valley deliver oil for shipment at Port San Luis. This is the greatest oil port on the Coast.

The rainfall part of the county is not sufficient for general farming, but the county as a whole produces good crops. There are many streams, and irrigation will be introduced wherever possible.

Wonderful mineral springs are at Paso Robles, and a great tourist hotel is connected with one of the finest establishments for the remedial uses of water, outside of Europe.

The Santa Ysabel is an old Spanish grant, now a fine modern dairy ranch with Holstein cows. A lake of mineral water is here, from springs pouring out 600,000 gallons a day.

The valley of Arroyo Grande has seed farms that send their product to every part of the East. Sugar-beets, beans and potatoes are also grown.

This is a good county, and affords room for many more profitable farms. It is traversed by the Southern Pacific and has a local road.

SANTA BARBARA COUNTY

Santa Barbara County is mountainous, but the northern section contains four valleys of much importance. In the Santa Ynez and Los Alamos cereals are the chief product. Lompoc Valley was early colonized by Eastern or Middle West people, and is a prosperous agricultural and orchard region. The sea is nine miles away, and the climate is delightful.

The Santa Maria Valley is much the largest and most populous. It has about 400 square miles, and is capable of supporting ten times the present population. On its southern border are great oil-fields producing yearly millions of barrels of crude oil. There has never been a crop failure, and it has no disadvantages which time will not cure.

The county produces beets, potatoes, beans, onions, olives, lemons, walnuts, mustard seed, dairy products and apricots. Santa Barbara is the chief city, and known over half the world for its fine climate. It is the winter home of many people from the East and from England. Fronting it are the Channel Islands, and between them and the shore is a quiet stretch of water.

In a broad way this constitutes the coast country, but scarcely hints its great charm of climate or its wealth of products. It is thought that three-fifths of the prunes of California and three-fourths of its apples are grown in this stretch of country. Beet-sugar, flour, wheat, barley, hay, garden seeds, oil, bituminous rock, asphaltum, cement, lime, coal, live stock, butter and cheese, fruits, berries, vegetables, beans, olive-oil, walnuts are the products of this coast country. All this will expand as water is supplied and intensive culture takes the place of wholesale farming and population multiplies. Climatically

SPRING TIME IN THE ORCHARDS

it is a region equally charming with that of the famous South Coast of France. This is a statement which will bear the test of the closest scrutiny. For residence for health, and for comfort in the field and the real delight of the farmer's outdoor life, there is nothing better on the planet.

SOUTHERN CALIFORNIA

The region best known, and usually referred to as Southern California, is not larger than the State of Delaware, or about one-third as large as the Sacramento Valley. It is substantially the orange country of the South, and includes a part of Los Angles County, a small corner of huge San Bernardino County, one end of Riverside County and a part of little Orange County. Upon this small territory the fame of California climate and productions chiefly rests. If you want to know why, the answer can be put in one word. The East has "discovered" this part of California—has invested in it, has made it a winter playground, has found its farm life profitable and fascinating. Visitors to the number of 40,000 or 50,000 come here every season; so many have decided to stay that the rapid development of the country has surprised even Californians.

DESERT TO GARDEN

It was virtually a desert; it has been made a garden. Indifferent grazing lands and grain lands that sold from $50 down to $2.50 an acre have been sold for $500 up to $2,500 an acre. In no country of the world can one so well see the transformation wrought by water and cultivation as here. If the settler thinks the dry fields of the great agricultural area we have been overlooking unpromising, we can assure him that this region of the South looked more so. What has been done to make this land a paradise of beauty, of comfort, of commonplace opulence, can be done along the foothills of the San Joaquin and Sacramento valleys in orange-culture, and can be done in diversified farm products on 10,000,000 acres of California lands not fully occupied north and south. Do not expect some climatic secret here which is not found elsewhere in California. The change wrought here in a few years has been due to irrigation and the small farm. A like transformation is going on in a thousand localities, but more slowly for lack of numbers. These sections have equal advantages with the South, but settlers have not found it out. The great body of agricultural and horticultural California is a unit in point of climate, but the East has not yet "discovered" it.

ORANGE GROVES

Of course there is here a specialized farm life. Part of the fascination of the South is orange growing. It is a clean, compact, beautiful and profitable kind of farm life. It takes strong hold of the imagination. It interests city people; it appeals to the business man who must rest and get into the country; it grips the rich man who, building a fine home in a delightful climate, wants something to do. The poor man who can only buy ten acres of land, denies himself and economizes for five or six years while his trees are growing, and then has an income of from $1,000 to $3,000 for the rest of his life. If his grove cost him after six years $750 an acre, it is worth $1,500 an acre, so that he has made a good investment. Many have grown their own trees from the seed, budded them, planted them, cultivated between rows the vegetables, made ends meet for some hard years, and then gone to live on "Easy Street."

The acreage of citrus fruits in bearing is about 60,000, and the gross value of the crop easily $30,000,000. That is to say, about 6,500 families owning from 5 to 20 acres of oranges have an income of $500 an acre. Many exceed this; some fall below it. Orange growing requires skill, good judgment, watchfulness, but it has insured for many years for the skillful grower a comfortable income in the midst of much beauty of surroundings, and in a better climate than that of Italy. The rapid development of this southern country has been phenomenal, and there is more than tourists and climate to explain it. Back of it all, and the chief explanation of it all, is a country of definite and positive productive power. Land values are high, and the water-supply at present fairly limited to the area now under cultivation. There is here a large leisure class, and opulent settlers have bought and planted orange groves, but they have no advantage which the men of energy and small means can not share with them on equal terms. The men whose work is now delightful and whose income invites to luxurious living, whose homes front on fine boulevards or who live in cities close by their orange groves, were many of them poor men at the outset. They came into a land that seemed to offer nothing but climate and scenery, and what they have done can still be done here in exceptional places, and generally in other localities. For Southern California, with its beautiful homes and high average prosperity, is but an object-lesson, an example of what can be done elsewhere over large areas of this wonderful State.

WIDER RANGES OF FARM LIFE

Only a fraction of Southern lands is devoted to oranges and other citrus fruits. The real Southern California has much diversified farm life. It begins about Santa Barbara with walnut groves and olive orchards and vegetable gardens, and includes oranges and lemons. Farther south are extensive bean fields and orchards of prunes, peaches, apricots and a large district producing walnuts almost exclusively.

The production of lima beans is a large industry in Ventura County. About eight million pounds are shipped annually, the yield being from 20 to 25 sacks per acre, worth in the market from $3.50 to $4.00 per sack.

RICH VALLEYS

Here is the Santa Clara Valley of the South, reaching down to the sea and drained by the little turbulent Santa Clara River. It has much rich farming land, many orchards and oranges, and lower down the valley a great sugar factory and wide stretches of sugar-beets. Nearer Los Angeles and running into the borders of the city is the San Fernando Valley, once given to wide wheat fields,

THE GOLDEN ORANGE—
FOUND IN ALL PARTS OF CALIFORNIA

now to orchards of olives and to various farm products, as well as cereals.

The San Gabriel Valley eastward from the city is rich and beautiful, with high priced lands and varied products. Southward from Los Angeles and quite open to the sea is the walnut country of Santa Ana, Anaheim, Fullerton and Whittier. The walnut is a native of Persia, and a walnut grove ranks next to an orange grove in dignity, beauty and profit. The trees are a little slower in coming to bearing, and the grower must reckon ten years of waiting. But planted 50 feet apart, there is room for inter-culture for about six years, which reduces the final cost.

Near the coast are great fields of celery on peat lands. The crop goes East in the late fall, and represents a large and prosperous industry.

DRY LANDS

Going down the coast we touch a large territory of dry lands given to grain and farmed in a careless way, producing light crops, but farmed as elsewhere in large tracts of hundreds and of thousands of acres, by individual owners or renters. Back of San Diego, and a few points higher up the coast, are small bodies of irrigated land outside of the citrus orchards, which are extensive. There are a great many small valleys very beautiful and productive, many of which have streams or are supplied with water. A movement is organized at San Diego to colonize lands for intensive culture, with a very small farm unit.

San Diego, in the county of San Diego, has a population of 50,000 people; is a ''port of call'' with a good harbor, and will be one of the large cities of the South. It has a good, but not large, tillable back country, but will make the most of its small valleys, and make them ideally productive by careful and wise cultivation. In time the region back of the city will be very beautiful with homes, orchards and vineyards. Irrigation will always tend to make a region beautiful by high cultivation.

In the Julian and Smith mountains superior apples are grown, and there is money in this crop wherever it can reach the hungry market. In all the region above and back of the city of San Diego there is room for the thrifty and enterprising settler.

This is true of all the region we have skimmed over here in this Edenland of the South, but the man who is looking in this direction must remember that, as population makes land values, and population here has been rapidly increasing for years, an investment now means substantial capital. But this is balanced generally by the returns. It is worth looking into more fully than we can in these pages, and the inquirer can easily ''post'' himself by writing to Boards of Trade in the various cities of the South.

IMPERIAL VALLEY

This valley is a part of the great Colorado Desert in the southeast corner of the State. It was a region of drought and barrenness in which only a few Indians roamed, finding scanty subsistence by a rude kind of agriculture in spots along the river moistened by overflow. In January, 1901, no white man was in this valley. In January, 1903, there were 2,000 settlers. A year and a half later the number had mounted to 7,000. Today there are 20,000 people, with six towns, a railroad, an electric line, electric light and power, hotels, banks, opera-houses, schools and churches and 275,000 acres under cultivation. The area of irrigable land is 700,000 acres and the valley embraces 1,000,000 acres in California, and 700,000 more in Mexico. It is delta land, the work of the great Colorado River. Its depth is very great, and the quality of the soil so fine, so loose and loamy, so free over wide areas from any excess of injurious salts, as to be a farmer's joy and pride. Nothing has been lacking this half-century or more, but somebody with courage to put water on this desert.

The Laguna Dam, which regulates waterflow above Yuma for the canals of the Yuma Project, one of the Government's great irrigation plants, will tend to make the river safe for this section, and the further diversion of water for irrigation up the river will eliminate danger

ALFALFA—THE DAIRYMAN'S BANK ACCOUNT

from overflow. It is part of the new policy of the Government to safeguard the settler as far as possible from damage by flood-waters, and the Colorado will be kept in bounds and made to serve.

The water of the Colorado, appropriated and controlled by the California Development Company, is sufficient to irrigate the acreage in California and as much more below the Mexican line. This company has the first right of diversion. Government records, covering a period of ten years, show a mean annual discharge of the river to be 15 times as great in volume as that used today to irrigate the immense acreage now in farms. This is the first question in the desert, water, and the permanence of the supply. The rest is climate. The heat is too dry to be oppressive in the hottest months; men work in the field without danger; three-fourths of the year the weather is pleasant and the winters are delightful. The absence of rain means the absence of mud, and the winters are not cold. Vegetation is scarcely interrupted. The valley is no longer ''desert,'' and as the traditional heat of the region was due to the absence of vegetation, green fields and the foliage of trees are working a great change. As orchards and shade trees by the roadside multiply, and the area of green fields and vineyards expands, the heat will be modified and the whole region will become a vast and beautiful oasis.

Given water for irrigation, a soil rich with stored energies which foster plant growth, and a temperature which stimulates development, you are prepared for the startling change which a few years have produced. The crops that are raised here are almost unbelievable—the growth of trees by the canals, of fruit-trees in the fields, the early bearing of vines and the precocity of all kinds of plant life. Alfalfa seems to enjoy getting down into the silt, and has its roots quickly buried 10 feet below the surface; cantaloupes run riot, and the first planting made fortunes for the sagacious ones; onions are a good crop, and 60 to 75 cars were produced this year, the growers receiving two cents per pound. Broom corn matures perfectly and the yield is large. Over two tons of millet were grown to the acre after a crop of barley had been harvested. Cabbage for export will be largely grown. Oranges are showing well, and dates will probably be extensively grown. There are large fields of asparagus, and this will be a profitable crop. The dairy promises good returns, and the production of alfalfa, barley and hogs is already large. Grapes are ready for market as early as May, and are shipped successfully to New York, bringing fancy prices for the grower. Figs ripen several weeks ahead of the same crop in other localities.

COTTON GROWING

Cotton has been tried out very fully for several years, with the result that 15,000 acres were planted in 1910. It is now certain that a new industry is fully established, the short staple upland cotton producing a good commercial fiber, and the first planting by men knowing little of the industry has produced a bale and a half per acre. Something has been learned about irrigating and planting the seed, and it is believed that the output per acre will be increased. The growing season lasts from March to December and the cotton is uniform in staple and color. The heat and dryness of the air will probably keep out the boll weevil.

At Yuma, Egyptian, or long staple cotton, has been successfully grown, and Yuma is in the same general climatic belt as Imperial Valley.

A feature of the valley is the success of poultry. Great herds of turkeys range the alfalfa fields, largely caring for themselves.

Everywhere are homes and growing crops, vineyards and orchards, and the miracle of irrigation is transforming what seemed but waste lands, and making one of the great producing centers of the world.

There is no public land in the area now supplied with water, and land can only be had by buying from private owners at current prices.

Land values are shifting constantly, but crops and produce of the lands are selling at good prices, and the income from lands would justify a higher valuation than is being placed on them. The opportunities for settlers are still good and the area of tillable lands will steadily widen as the canal system is extended. The days of experiment have gone by and the miracle of irrigation is here before the eye.

SOME DESERT NEIGHBORS

On the main line of the Southern Pacific is Coachella Valley, a dozen miles wide by perhaps 20 long. Here the desert again is green. Water spouts up from artesian fountains and another oasis is spreading. The higher sections are watered by pumps. There is thought to be water enough for the entire valley. If so it will be a closely settled and well-tilled valley. There are four towns in this valley—Indio, Coachella, Thermal and Mecca. At the latter place the Agricultural Department has long had a date garden, seeking to determine the fitness of this desert for this special fruit and to test varieties. There seems little doubt but that California will add dates to its long list of foreign fruits. The earliest fruit and vegetable section in the United States is here in the delta of the Colorado. Both Indio and Coachella are below the sea level, as is also a part of the Imperial Valley.

At Yuma the Government is about ready to turn water on a large acreage on both sides of the river. The Yuma Valley in Arizona has long been cultivated, but with intermittent water supply and, under the splendid provisions for watering these lands, now about completed by Government engineers, there will be here a commercial city to which a large farm area will be tributary. There is a considerable acreage on the California side, and water is ample to cover all the available lands. Plans are projected for watering limited areas farther up the river and the outlook is that verdure will take the place of barrenness for many miles along this turbulent stream, and that productive farms will be cut out of the desert to supply the mining regions up as far as the Needles. The opportunity to get a valuable holding is here exceptionally good.

The old prejudice against the desert is gone, and now it is only a question of water and capital to develop it. Then the desert puts on another face. The interested settler will do well to write to such points as El Centro, Imperial County; to Coachella and Yuma for details which can not be given here.

MORTGAGES FLEE FROM COWS, ALFALFA AND HOGS

NORTH COAST AND MOUNTAIN VALLEYS

The counties north of San Francisco Bay are important enough to claim the attention of the dairyman, the vineyardist, the fruit-grower and also the general farmer.

The first is Marin. Small, with a limited area of tillable land, but a fine dairy section and close to the market at San Francisco. It produces good apples and has a moist, cool climate.

INLAND VALLEYS

Sonoma County is one of the best agricultural counties in the State, and having a good rainfall, irrigation is not practiced. The products are corn, hay, grain, hops and vegetables, with fruit of many kinds, wine grapes, walnuts and berries. This county produces superb apples.

Sonoma Valley is about 20 miles long by 8 miles wide, with a deep rich soil.

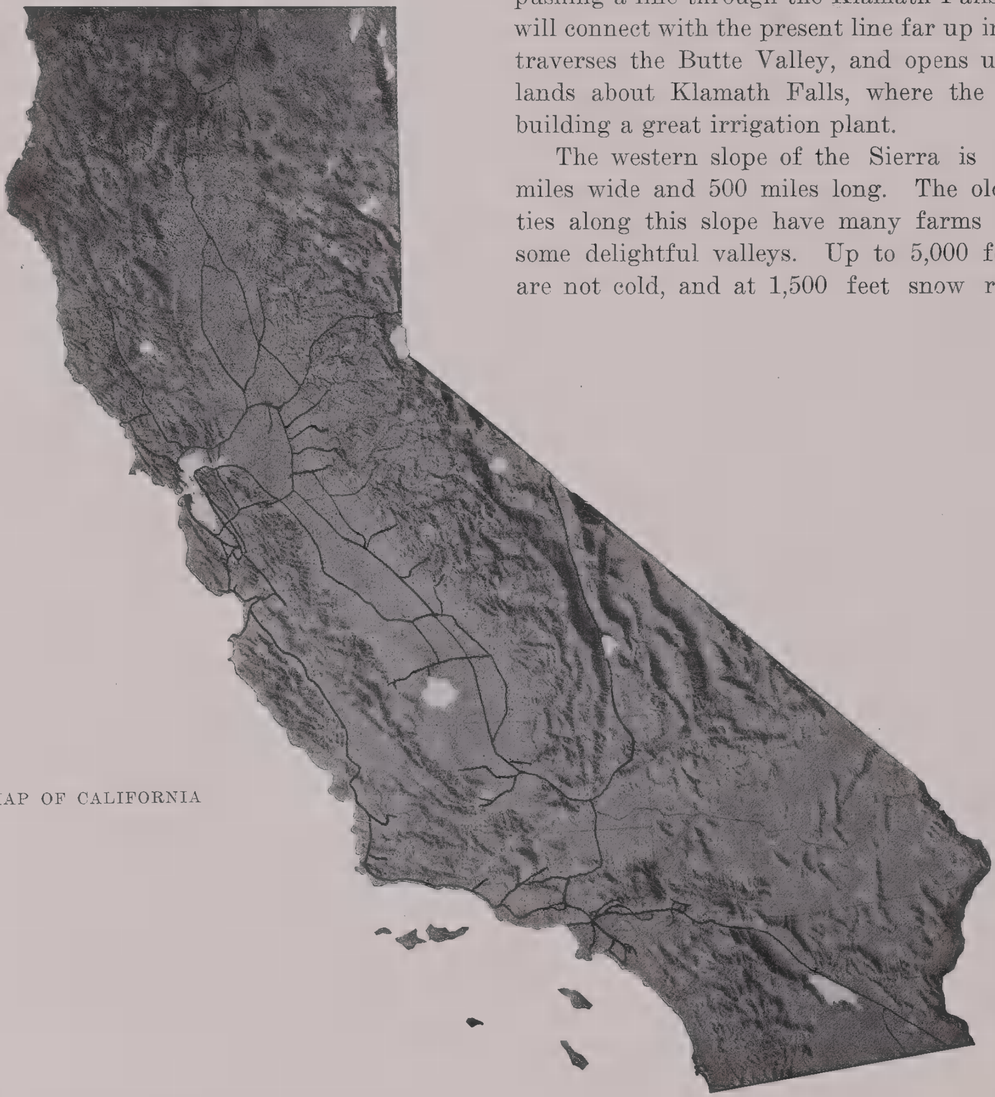
Petaluma Valley lies to the west of Sonoma, and is a region widely celebrated for its poultry. Whole hill slopes are white with leghorns. The business is profitable where managed by experts.

Russian River Valley is narrow, but fertile, and reaches far up into Mendocino County. Its lower stretches claim many summer visitors from the bay region, and the hills are full of campers.

Napa Valley was early settled and widely known as "Napa the Beautiful," excursions from San Francisco being a feature for many years. It is about 35 miles long by from one to five miles wide, and full of farms, orchards and vineyards. The Napa River is a tidal stream and boats run to Napa City. The county is noted for its vineyards and for its fine climate and mineral springs.

Lake County is reached through Napa or Sonoma, an inland, inter-mountain county, very sunny, very dry, very beautiful with mountains and valleys and lakes and celebrated for its many fine mineral springs. Big Valley, Potter Valley and others are rich farming regions. Railroads are projected, but as yet unbuilt. Mendocino, Humboldt and Del Norte counties are directly on the coast, and constitute chiefly the great redwood forest wealth of the State.

The rainfall is ample for crop production and in the mild air crops are prodigious. Mendocino has many dairies, large stock interests, many small valleys and growing orchards. Wool is a large product. Eel River is a fine rich valley, with its outlet in Humboldt County. The Ukiah Valley is best known. The predominant interest of all this region is lumbering. Humboldt County has a fine harbor and on it the growing city of Eureka.



MAP OF CALIFORNIA

The whole north coast is benefited by the completion of the Northwestern Pacific Railroad, which now connects this region with San Francisco.

Humboldt County has a fine harbor and shelters much shipping. In the north, Siskiyou County has much farm and grazing land and a number of fine valleys. Scott and Shasta valleys have long been occupied. Butte Valley, embracing about 40,000 acres, has been a grazing country, but is now being settled by farmers. A colony of Dunkards is well established, and a colony of Mennonites has recently purchased a large tract. These religious people are farmers, thrifty and simple in their habits, and are desirable citizens.

The soil of Butte is rich, the climate mild but bracing, and all cereals save corn, and all the hardy vegetables and fruits do well. Apples will be grown and the dairy will flourish. There are several growing towns. The elevation is about 4,000 feet. The Southern Pacific is pushing a line through the Klamath Falls country which will connect with the present line far up in Oregon. This traverses the Butte Valley, and opens up the irrigated lands about Klamath Falls, where the Government is building a great irrigation plant.

The western slope of the Sierra is from 40 to 70 miles wide and 500 miles long. The old mining counties along this slope have many farms and towns and some delightful valleys. Up to 5,000 feet the winters are not cold, and at 1,500 feet snow rarely falls. A home with mountain people, farmers, fruit-growers, miners, stockmen, lumbermen has much to recommend it and the cheaper lands and lighter air of the region make it attractive for many. Schools and churches are everywhere.

CLIMATIC CONDITIONS

The northern coast and the elevated valleys of the Sierras have a bracing climate, delightful summers, but a sharper winter air than in the body of agricultural California, yet still Californian in its mildness. They are the outlying regions, having generally a prosperity of their own and a moderate growth of population and of real estate values.

TEMPERATURE, RAINFALL AND SNOWFALL IN EACH COUNTY IN 1914.

(Compiled from the Report of the United States Weather Bureau, San Francisco.)

Counties	County Seat or Observation Station	Elevation, Feet	Temperature		Rainfall, Inches	Snowfall, Inches
			Highest	Lowest		
Alameda	Oakland*	36	86	35	24.21	0
Alpine	Tamarack	8,000	85	—22	44.51	286.0
Amador	Ione	287	104	28	21.76	0
Butte	Oroville* (near)	250	109	29	26.24	0
Calaveras	Mokelumne Hill	1,550	101	30	32.32	3.0
Colusa	Colusa*	60	104	28	7.17	0
Contra Costa	Martinez*	....	....	....	....	....
Del Norte	Crescent City*	125	91	28	91.09	2.0
El Dorado	Placerville*	1,875	98	24	42.45	4.0
Fresno	Fresno*	293	106	27	9.67	0
Glenn	Willows*	136	111	27	21.31	0
Humboldt	Eureka*	64	78	32	37.91	0
Imperial	Calexico	0	113	26	2.83	0
Inyo	Independence*	3,907	101	3	9.30	T.
Kern	Bakersfield*	404	108	24	6.50	0
Kings	Hanford*	249	....	....	....	....
Lake	Upper Lake	1,350	104	24	33.79	0
Lassen	Susanville*	4,175	102	—4	18.06	60.3
Los Angeles	Los Angeles*	293	97	40	23.21	0
Madera	Storey	296	106	25	....	0
Marin	Point Reyes	490	88	37	16.68	0
Mariposa	Yosemite	3,945	110	0	32.83	90.5
Mendocino	Ukiah*	620	108	23	43.44	0
Merced	Merced*	173	106	26	14.72	0
Modoc	Alturas*	4,400	102	—9	8.88	22.2
Mono	Bridgeport*	6,500	90	—21	11.47	30.0
Monterey	Salinas	40	91	30	....	0
Napa	Napa*	60	101	....	....	....
Nevada	Nevada City*	2,850	100	19	48.10	9.0
Orange	Yorba Linda	405	98	34	19.33	0
Placer	Auburn*	1,360	104	28	26.43	0
Plumas	Quincy*	3,400	98	0	40.45	60.0
Riverside	Riverside*	851	104	30	15.54	0
Sacramento	Sacramento*	71	102	30	16.05	0
San Benito	Hollister*	284	98	28	17.38	0
San Bernardino	San Bernardino*	1,054	104	26	21.85	0
San Diego	San Diego*	93	90	39	10.90	0
San Francisco	San Francisco*	207	92	41	24.04	0
San Joaquin	Stockton*	24	102	30	16.25	0
San Luis Obispo	San Luis Obispo*	201	98	32	26.74	0
San Mateo	Redwood City	....	....	....	....	....
Santa Barbara	Santa Barbara*	130	98	35	29.64	T.
Santa Clara	San Jose*	95	95	29	17.75	0
Santa Cruz	Santa Cruz*	20	97	27	32.12	0
Shasta	Redding*	552	109	21	48.37	7.0
Sierra	Downieville	3,150	103	13	64.02	37.7
Siskiyou	Dunsmuir	2,285	104	18	57.17	59.4
Solano	Suisun	20	106	32	25.32	0
Sonoma	Santa Rosa*	181	100	24	34.62	0
Stanislaus	Oakdale	156	104	29	16.78	0
Sutter	Yuba City*	57	....	....	....	....
Tehama	Red Bluff*	307	108	28	27.51	0
Trinity	Weaverville*	2,162	103	18	34.59	2.0
Tulare	Visalia*	334	108	25	6.89	0
Tuolumne	Jamestown	1,471	102	20	38.74	3.0
Ventura	Ojai Valley	900	101	27	36.83	0
Yolo	Davis	51	104	26	22.25	0
Yuba	Marysville*	67	105	28	20.64	0

*County seat. When there is no observation station at the county seat some other station is given. There is no observation station in Contra Costa, Kings, Napa, San Mateo or Sutter counties. In the last named the figures for Yuba may be accepted as correct, as Marysville is on the opposite side of the river. The snowfall in the mountains is more or less heavy; it rarely falls in the Sacramento and San Joaquin valleys. At Summit, in Placer County, 361.5 inches of snow fell, and at Tamarack, in Alpine County, 286 inches of snow were recorded in 1914.

Summary for the year 1914: Probably not in a decade have weather conditions given such general satisfaction as during the year 1914. The rainfall was above normal and was very well distributed both as to time and place; there were few frosts, and very little damage resulted. The rainfall was unusually heavy in the winter, and floods caused considerable damage in the north in January and in the south in February. Bridges were washed away, towns were flooded and railroad traffic demoralized. The winter and early spring months were very warm, and vegetation was from three to four weeks earlier than usual. December was the coldest month since State records were begun in 1897. The winter snowfall was the heaviest in years. It was well packed and melted slowly, yielding a plentiful supply of water for all purposes through the summer months.

LEADING RESOURCES OF CALIFORNIA

AS VIEWED BY EXPERTS AND AUTHORITIES IN THEIR RESPECTIVE LINES

Relations of California Soils to Permanent Fertility

BY DR. C. B. LIPMAN

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AS THE source of the raw materials of food, clothing and shelter for the world the soil occupies a position of unique importance to man and animals, which, if comparisons were not odious, would place it paramount to all other interests of mankind. While, however, the conservation of all the soil's resources has received but scant attention, the significance thereof is much more fully appreciated and comprehended than its nature, variation and mode of functioning as such indispensable factor in our existence. Assuming, therefore, that my readers are fully aware of the overwhelming importance of the soil to the material welfare—if nothing more—of the human family, I shall not go into a discussion of the economic phases of the subject, but shall confine myself to some interesting discussion with reference to the nature of soils, particularly of California soils. I shall attempt, moreover, to bring out as popularly and as clearly as I can how a soil's nature, in the broader sense of that term, is related to the kind and quantity of crops which it can produce and other factors concerned with the production of a fertile soil or with the maintenance of such.

THE TEXTURE AND STRUCTURE OF SOILS

As may appear obvious, the soil is not a solid mass of rock particles, but one in which the spaces about the particles are of considerable size. This total pore-space as it is called, will vary from 40 per cent in the coarser sands to 60 per cent in the finest silts and clays. In other words on the average every acre foot of soil in depth is only one-half solid material, the balance being empty space. For optimum conditions with respect to the plant's air and moisture supply, half of such open space should be filled with water and half with air. The air and water supply of soils is therefore in considerable degree regulated by the ''texture of the soil,'' as it is called, and by which we mean the mechanical composition thereof. This mechanical composition is determined by separating a soil into the various amounts of each of its component sizes of soil grains. It must be remarked here, however, that another factor besides pore-space and even more markedly than the latter, regulates the water supply. This factor is the total surface of the soil particles within the soil. While pore-space, as we have seen, varies relatively little between the coarsest and the finest soils, the surface is enormously different between them. Water is not only spread over the surfaces of these particles, but a larger surface means usually a greater retention of water, and since water serves to dissolve off the minerals from the surfaces of soil particles and yields them as food to the roots of plants, we can readily see the important relationship of the internal surface of a soil to its fertility.

In this connection we are brought to consider soil structure as distinguished from soil texture. By the latter we mean the coarseness or fineness of a soil or the proportions of sands, silts and clay which it contains. By structure we mean the kind of aggregate particles built up in a soil from these single particles through the cementing action of organic matter, various salts, frost, changes in temperature, tillage, action of roots of plants, action of bacteria, lower animals, etc. These more or less loosely cemented soil-particle aggregates determine the structure of a soil and modify very materially its total surface, and hence its water holding power, air holding power, and available laboratory space, as it were, for the manufacture of soluble plant foods. These ideas with reference to soil texture and structure must be borne in mind when the discussion below given is considered. There are perhaps but few people who realize how enormous the internal surface of soils is and for that reason it is hard for the uninformed to realize what a profound role is played by it in the economy of plant nutrition. It may be said that in an acre of soil to a depth of four feet the total surface may vary from 40 to 50 square miles in the coarse sands to about 300 or more square miles in the finest clay loams and clays.

One of the prime objects in soil management should be to make such skillful use of tillage, liming, draining and the introduction of organic matter as will insure an ideal condition for the formation of aggregates of soil particles known as compound particles, or in other words, to make certain of proper soil structure.

THE SOIL AS A MEDIUM OF PLANT GROWTH

The soil attains its greatest measure of usefulness when it permits the largest and most healthful development of the roots of plants. It is therefore of value in agriculture in such measure as it approaches the ideal condition as a medium for plant, or more specifically, of root growth. In other words, the development of the above ground parts of plants merely mirrors the development of their below ground parts—the roots. That being the case, and the investigations of many men in many places will bear out this assertion, it follows that one can only succeed in making the soil function successfully as a producer of plant growth by providing therein, as nearly as may be, the conditions which are congenial to a wide ramification of roots. It becomes logical therefore to inquire, What are such congenial conditions for root development?

To answer that query it is necessary first to understand that there are certain indispensable requirements for plant growth, including roots and tops. These are air, moisture, plant food, heat and light. The first four are common to both roots and tops. The last named is necessary for the tops of plants only and, since it perforce accompanies the supply of heat which comes principally from radiation from the sun, we shall give it such consideration as it needs under the head of heat. We may now, to advantage, give to each of these prime necessities for plant growth more detailed attention.

The Air Supply—Plants are no exception to the general rule that living things, from the simplest to the complex, must have a sufficient supply of air in order to carry on their normal functions. While this general idea is pretty thoroughly understood by the layman, there is at least one phase thereof which the average individual does not in the slightest appreciate. I refer to the absolute necessity of oxygen for the roots as well as for the tops of plants. While in the case of aquatic plants such oxygen is necessary only in small quantity, and in the case of others in large quantity, it is none the less indispensable. Space will not permit my fuller discussion of the evidence adduced by investigators to prove the close relationship between air supply for the roots of plants and the well-being of the latter. I need but refer the reader to the splendid contributions of soil physicists on this point as typified by that part of King's "Physics of Agriculture," which deals with that subject. Suffice it to say here that it has been demonstrated beyond peradventure of a doubt that, other things being equal, the growth of plants in soils is a function of the air supply for their roots. If the reader will bear this point in mind he will the more readily grasp the cogency of statements made below anent California soils and their productiveness.

The Moisture Supply—That water is an essential material to plant growth becomes at once obvious when one considers: First, that seldom less than three-fourths of the weight of plants consists of that simple chemical compound of hydrogen and oxygen. Second, that water is the vehicle by which available plant food is carried up to the plant factory—the leaves. Third, that water is necessary to the life and well-being of plants and to the purely chemical as well as biochemical chances which must occur in soils if plants' roots are to be supplied with so-called available or usable plant food.

The Heat and Light Supply—The heat and light necessary to plant growth are, of course, almost entirely received from the radiant energy of the sun. The absolute dependence of plants on heat is well illustrated by the fact that but very few seeds will germinate at the freezing temperature, that the earliest crops are produced on the driest and hence the warmest soils and that that most luxuriant plant growth is obtained in the tropics and other regions of high temperatures on the earth's surface. The reasons for such dependence of plants on heat are very well known and can be summed up as follows: First, the activity of the individual cells of which plants are composed is dependent upon a certain degree of temperature for the accomplishment of chemical and biochemical reactions by them which are essential to life. Second, chemical reactions are doubled in rate with every rise of 50 deg. F., thus hastening the transformation in the soil of insoluble to soluble plant food materials. Third, the bacterial activity in the soil, which is responsible for some of the chemical reactions by which plant foods are made soluble from insoluble, must have enough warmth in order to activate. For example, the best work of nitrate-producing bacteria takes place at a temperature of about 86 deg. F.

Light is necessary only for the tops of plants, but is there absolutely indispensable since the green coloring matter of the plant leaves known as chlorophyll, which is the agent in the manufacture of sugars and starches from carbonic acid gas from the air and water from the soil, can not work in the absence of light. The latter furnishes the energy for that most interesting and still mysterious process.

The Plant Food Supply—We have now known for over a century that of the eighty odd chemical elements known there are but ten which are essential to the life of plants. They are carbon, hydrogen, oxygen, nitrogen, phosphorous, sulphur, potassium, magnesium, calcium and iron. The first three are obtained from the air and from water, and if the latter is properly supplied and conserved plants will not suffer for the want of those elements. The other seven essential elements are obtained by the roots of plants from the chemical compounds in solution in the soil water. One of them, nitrogen, may be obtained from the air by certain classes of plants—the legumes, including clovers, alfalfa, vetch, peas, beans, etc.—through assistance rendered by a class of bacteria which lives in little nodules on their roots. The chemical compounds otherwise referred to as being in the soil water are derived by weathering of the minerals of which soils are largely composed and which, of course, are in turn derived from the rocks from which they were originally split off. When soils are formed

WATER IN ABUNDANCE—ONE OF CALIFORNIA'S IMPORTANT ASSETS

from a few minerals like quartz, which contain very little if any of the essential elements aboved named, the latter must be added in some form commonly known as fertilizers.

CALIFORNIA SOILS IN THE LIGHT OF THE FOREGOING

From the principles above enunciated it follows that soils must of necessity show great variations with reference to their supply of air, moisture, heat and plant food not only under given set of climatic conditions, but more particularly under different climatic conditions. Thus in a region of much rainfall, in which clay forms more rapidly, we should expect a predominating number of clay soils with excessive water-holding power, especially in the subsoil into which much of the clay is beaten by heavy rains. But if that is so they must of necessity have a more limited air supply. Also when soils hold much water they use up so much heat in the evaporation of water that the soil only with difficulty attains the degree of temperature optimum for plants. Then too in soils with much clay and much water, roots can not develop widely and deeply for reasons explained above, or in other words, their foraging surfaces is decreased. Finally in a region of much rainfall much better opportunities for the leaching out of plant food are available and particularly of that fraction of the plant food known as the supply of available plant food, which is the only portion that plants' roots can assimilate.

Conversely, it follows that in the other extreme of climate or, in other words, in the arid as contradistinguished from the humid region, the drawback above pointed out must largely disappear and be replaced by as many advantages. Thus in California, which belongs in the arid region of small rainfall in a limited season, clay forms more slowly. Soils here are thus predominantly of the lighter or sandier variety. It follows from that, that air must penetrate into them with greater facility and to a greater depth; also that excessive amounts of water will more readily drain away. But these are congenial conditions for a large and deep root development. Therefore roots must have a much larger area of soil surface from which to obtain the great necessities to their existence above enumerated. The climate of the arid region insures to plants, moreover, similar advantages with regard to heat and plant food. For the larger number of days of sunshine, which we have along with the warmer sun in summer, and the very mild winter temperatures operate to maintain a much greater amount of heat in our soils. Likewise in the absence of excessive and continuous rainfall, there must occur the minimum leaching effect and hence arid soils, to which ours belong, must contain far more of the elements found in soils which are essential to plant growth.

THE DEPTH OF CALIFORNIA SOILS AND ITS SIGNIFICANCE

Briefly, therefore, the climatic conditions peculiar to the arid region have made possible the formation in California of soils popularly spoken of as deep, well aerated, and rich or well supplied with plant food. Their depth, moreover, is at once the most characteristic and most valuable asset of California soils. For greater depth means, popularly speaking, greater foraging surface. From what has been said above it stands to reason that a plant root which covers two hundred soil particles and therefore has available to it all the plant food carried in the water films which invest them, must have twice the chances for a successful and vigorous growth that are possessed by a similar plant whose root sytem has only available for its spread one hundred soil particles of the same kind. A proper understanding of this simple fact renders easy the explanation of the celebrated fertility and durability of arid soils. It is the key, moreover, and this is very important, to the development of systems of soil management in California which, so far from reducing the wonderful intrinsic fertility of our soils, will render possible the enhancement thereof.

We therefore have the advantage of not only much more of the important plant food elements in an acre foot of California soils than exist in an acre foot of an Eastern soil because of the lack of leaching here, but for every acre three feet in depth offered the roots of plants by Eastern or humid soils, our soils offer at least six feet in depth of such available and congenial soil surface. In many of our soils these depths are much greater.

A little reflection will make it obvious that the logical outcome of such a condition as that above described for California soils, is that they will last longer not only because they have been leached less but because the roots of plants have so much more soil surface to draw upon for their food. Fertilizers need therefore to be used sparingly, if at all on many of our soils, thus making the cost of maintaining a fertile soil a much smaller one in California than in Eastern states or other humid regions. California soils contain, on the average, ten times as much lime as Eastern soils, about three times as much potash and about the same quantity of phosphoric acid. This is true when equal weights or volumes of soils from the two regions are compared. If we assume that our soils have only twice the amount of surface (they have much more) suitable for root development possessed by Eastern soils, then there is on the average, available for the use of plants, twenty times as much lime in the soils of California as in the Eastern states, six times as much potash, and twice as much phosphoric acid. The condition with respect to nitrogen is that in reality most California soils are poorer than Eastern soils in that important element, weight for weight, or volume for volume, but here again depth and extent of soil surface enter into the subject and owing to the greater depth of our soils considerably more nitrogen is available for the uses of plants than in Eastern soils, taking averages for consideration.

THE ONE GREAT DEFICIENCY IN CALIFORNIA SOILS

The one great deficiency in all the arid soils of California, such particularly as those of our interior valleys, is organic matter. The latter is the characteristic component of agricultural soils and distinguishes them from masses of disintegrated rock particles. It is a material which maintains a good structure in soils in accordance with principles above explained; it is the chief source of carbonic acid gas, which dissolved in the soil water helps to change insoluble to soluble plant food materials; it is the source of nitrogen for most crops; it furnishes carbon and other materials as sources of energy for soil bacteria of various kinds which are essential to the maintenance of an available plant food supply.

Many methods may be employed to make good this deficiency in California soils. Barnyard manure should be used to plow under as the first choice, whenever it is available. The next method should be the deep incorporation through plowing of green manure crops or cover crops. In the southern part of California the vetches serve best for this purpose. In other parts of California burr clover or Canada field peas may be used, or one of these mixed with grain like barley, oats, wheat or rye. When none of the legumes can be employed a cover crop of the grains alone will assist. When none of these methods is practicable, well-rotted bean straw or spoiled alfalfa hay, preferably, or other forms of straw and weeds, both green and dry, should be mixed with a small quantity of stable manure and thoroughly packed and moistened. This will make a large mass of well-rotted organic matter which is excellent for incorporation with the soil. In valleys with a very long, hot summer, organic matter of some kind should be placed on the surface of the ground, especially in orchards, to keep the soil cool and moist. This will prevent rapid oxidation or ''burning out'' of the organic matter. This operation, which is called ''mulching,'' can be carried out about May 15 or June 1 and cultivation discontinued for the balance of the summer.

IRRIGATION AND DRAINAGE OF CALIFORNIA SOILS

It is manifestly impossible to discuss with any degree of detail this important subject in the brief space allotted me, but some serious abuses in our irrigation practice render a proper comprehension of the subject of the greatest practical moment. I venture therefore to speak of these important points briefly. In a word, the greatest evil about California irrigation, probably also about irrigation elsewhere, is an unnecessary extravagant use of water. Viewed merely from the point of rural economy the practice is a reprehensible one, but considered from the standpoint of soil fertility and its maintenance, it is little short of criminal. Excessive use of water militates against proper temperature conditions in the soil and prevents the supply of air from being normal. The cogency of these two objections is attested by the considerations hereinabove discussed, but the most important objections have still to be mentioned. Excessive use of irrigation water raises the water table, thus making worthless large surfaces of soil particles which should serve as sources of food and water for the roots of plants. Moreover, the rise of the water table is always accompanied by the improvement in the power of capillarity in a given soil to raise water to the surface. In arid regions which, as above explained, are supplied with large quantities of soluble salts from the rapid weathering of soil minerals there, such rapid movement of water upwards will transport to and concentrate at the surface large quantities of these soluble salts and, as the water evaporates, it leaves there the salt accumulations that are responsible for injury to crops on alkali lands. It would appear that such irrigation is carried out on the basis of the popular maxim that ''if a little water is good more is better'' and that water can make up for lack of tillage and other methods of maintaining soil fertility. People do not sufficiently realize that a small amount of water properly conserved in soils can produce paying crops and preclude the danger lurking in the excessive use of water of destroying the soil's fertility. Constant summer cultivation, as nearly as possible once a week, or mulching as above explained, in orchards and vineyards, will make possible such excellent conservation of the moisture that only one or two

A CALIFORNIA COTTON FIELD

irrigations in a summer will supply all the needs of the crop even in a region of very deficient rainfall like the San Joaquin Valley.

Another common misconception with respect to the soils of California is that drainage is unnecessary because there is so little rainfall. As a matter of fact, drainage is frequently necessary even on lands receiving no irrigation and certainly will be needed on flat areas of land with a slight slope and poor outlet, if damage from a rapidly rising water table and its concomitant evils is to be averted. All who are interested in the maintenance of the wonderful fertility of California soils should therefore keep prominently before them the vital necessity of preventing excessive use of water in irrigation and of providing drainage wherever called for.

THE ADAPTABILITY OF SOILS TO CROPS

The writer entertains a genuine fear that this subject is one which is more hopelessly muddled in the lay mind than any other touching agriculture. Indeed he has good reason to fear that the professional agriculturist even is often in a state of abysmal ignorance with reference to the facts in the case.

Two misconceptions seem to be characteristic of the uninformed. First, that a chemical analysis of a soil will reveal its adaptability to crops. Secondly, that secular selection of plants by natural means has progressed so far as to render necessary a most careful selection of a soil for any given crop either according to mechanical or chemical standards of judging soils.

While indeed there is no reliable evidence that some truth may not attend these conceptions and that very profound and extended study may prove them in part justified, we are obliged as scientific men to regard these ideas in the light of present knowledge as being, if not in their entirety, at least largely, chimerical. As a matter of fact, practical experience, which gives us the only reliable data on the subject, thus far teaches that almost any crop may be made profitable on almost any soil, abnormal conditions below discussed being barred, of course. Nothing can be more patent in this regard than the fact that alfalfa is being grown successfully on every type of soil in the state of California and we are not without our just quota of such types. Citrus trees are produced successfully on the lightest and on the heaviest soils and on all intermediate types. Vines are grown successfully on shifting sands and on the heaviest black adobes. Barley and wheat do not seem to show clearly marked preferences. Even such crops as peaches and almonds are grown successfully on a very wide variety of soil types despite the prevalent idea that they will only do well on our light soils. We might in this manner run through the whole gamut of California crops and still be unable to discover in practical results indications of a specific adaptability of soils to crops.

To be sure some soils will produce more fruit of a given type than others, but that is not connected at all with the question of adaptability, but merely with a difference in power to supply the essentials for plant growth which are above named. This power can be very much modified, as shown in this paper, and what is more important, the difference will affect any crop and not only a specific crop. Our ideas with reference to this subject have about as much foundation in fact as those other ideas which are just as prevalent with respect to the specific effect of the essential plant food elements in fertilizers. There is no more justification, thus far, for believing in the specific adaptability of a soil for a crop than there is for the belief that potash makes a thin and smooth rind on an orange or other fruit, that lime makes a sweeter fruit, and that phosphoric acid increases coloring of fruit.

ABNORMAL SOIL CONDITIONS

There are several abnormal conditions to be met with in arid soils like those of California which are common enough to justify special mention here. They are particularly hardpan and alkali conditions.

Hard Pan—A hardpan is an impervious and refractory layer of soil which is rarely penetrated by roots, water or air. It occurs anywhere from the surface of the soil to any depth several feet below, and it varies in thickness from a fraction of an inch to many feet. Depending upon the kind of minerals present in the soil in which it is formed, hardpan will vary widely in nature. We may thus have produced by the cementing action of chemicals and pressure of the surface soil a rock-like mass partaking of the nature of the soil material above but very hard and impervious. Sometimes, therefore, there may be sandstone hardpans and at other times lime hardpans, iron hardpans, gravel hardpans and black alkali hardpans. The damage done by such hardpan layers is of course increasing the damage to plants by preventing free flow of excess water downward, by decreasing the available surface for root development, and by making possible a faster rise of the water table than ordinary on irrigated land and with it the rise and concentration of the alkali.

Ameliorative measures against hardpan consist of blasting, principally. Blasting with dynamite is most effective only if hardpan does not exceed several inches to one foot in thickness and if it can be done in every tree hole in the case of orchards to make possible better and wider root penetration as well as drainage of excess irrigation water. Where hardpans are more than several inches in thickness only very careful and economical use of water and thorough tillage and heavy manuring can put off the day of trouble for crops. Even such methods will only be successful on lands with at least 2½ to 3 feet of good soil over the hardpan.

Alkali—By the term "alkali" we mean an accumulation of soluble salts. These are derived in most California soils, as implied in the discussion above, from a weathering of soil minerals which render possible the formation of soluble salts and the subsequent transportation upward of such salts by rise of capillary waters carrying them in solution. As the water evaporates when it arrives at the surface the salts remain behind and the soluble salt accumulations of several feet in depth are thus concentrated at the surface. Thus while they were harmless or even beneficial as diffused in several feet of soil they are rendered injurious through concentration. Usually these salts are common salt (sodium chloride), Glauber salt (sodium sulphate) and sodium carbonate (salsoda). Any or all of these may be present in alkali lands. The first two are usually denominated collectively "white alkali" and the last named is known as "black alkali" because of its power to dissolve organic matter from the soil and produce black spots at the surface. Gypsum occurs with these alkali salts not infrequently and sometimes also magnesium chloride, and magnesium sulphate. The damage done by alkali salts is through corrosion and poisoning of the plant tissue and by preventing proper water absorption by the roots of plants. They also destroy good structure in soils and make the latter impervious to air and water.

As the reader may readily surmise, the usefulness of alkali lands in practice must depend not only upon the total quantity and nature of its components but also upon the type of soil in which they are found. In general, it may be said that the results of modern research make it appear highly probable that we shall take a much more hopeful view of alkali reclamation in the future than we have in the past. Not only such feasible, but expensive, methods as flooding and tile drainage to carry the salts away will be largely employed, but also the introduction of organic matter and direct chemical treatment to prevent the detrimental activity of the alkali salts will doubtless soon be resorted to. It seems safe to assert that the next decade will see the reclamation and profitable use of enormous areas of land now referred to as barren alkali land by the use of methods above referred to.

CONCLUDING REMARKS

In the discussion of outstanding general principles and of particular conditions in their application to California soils the writer hopes that he has made the most economical use of the brief space allotted him. If the reader will have learned from my remarks that the most valuable asset of California soils is their depth, he will have grasped the essential truth about them. Moreover, a proper understanding thereof explains the inherent fertility of our deep soils and gives a reasonable and logical basis for their management from all points of view. It is also hoped that the reader will catch from the foregoing paragraphs some of the author's enthusiasm for the fascination of a subject which deals with a study of a most wonderful medium for plant growth in which there operate profound laws of physics and chemistry, and which is at the same time a home and laboratory for hosts of living organisms. All of these forces are constantly activating to make the soil a more congenial and richer medium for plant growth, if we will only make it possible for them to operate normally.

THE CLIMATE OF CALIFORNIA

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General Features.—The California climate is of the type known as Mediterranean because in its essential features it closely resembles that of this famous region. This is because the conditions controlling the climates of the two regions are the same. Climates similar in their main features are also to be found in Central Chile, in Southwestern Australia, and in New Zealand. The characteristic features of the Mediterranean or Californian climate are the generally mild temperatures—and this is in spite of the fact that in certain portions of the State the thermometer reads higher than anywhere else in the country—the dry, or nearly dry summers, and the occurrence of winter rains.

But the statement that California has the same general climatic features as the Mediterranean lands does not tell the whole truth. The mountains and valleys of the State make for a diversity of climate which, viewed superficially, seems extraordinary. The State has been called "a land of contrast and contradiction; a region of much sunshine and of much fog; a desert and a country of gardens. And because of the sea and the mountains, climate is so modified that men marvel, whereas it would be marvelous were it not so!"

It is scarcely possible to write of the climate of California; the State has many climates. These can be grouped for convenience as coast, valley, desert, and mountain; and although there are certain features common to all, the differences are as marked as are the similarities.

TEMPERATURE

Coast—The coast of California has climates of great uniformity. In the part of the United States east of the Rocky Mountains the differences between north and south are strongly marked, and the terms have almost the same significance as cold and warm. In California this is far from the case, and north and south have little significance as far as temperature is concerned; temperature changes much more rapidly from east to west than it does from north to south, the differences are those of coast and interior rather than of latitude.

The records of the weather bureau may be quoted to show this relation between north and south on the Pacific and the Atlantic coasts and in the great Mississippi Valley. Average temperatures for the year are manifestly of little value as showing actual conditions, although even in these averages the differences are not as marked in California as in other parts of the country. In the whole distance from Eureka to San Diego, nearly 700 miles, there is a change of temperature of only 10 degrees, while in the same distance on the Atlantic Coast the difference is 17 degrees, and in the Mississippi Valley it is 16 degrees.

But more important than uniformity with change of latitude is uniformity throughout the year. While the differences of latitude between summer and winter on the Atlantic Coast are 30 to 40 and in the Mississippi Valley even greater, the California coast region has differences of less than 10. The region is, therefore, one of warm winters and cool summers when compared with almost any other portion of the country.

The explanation of the mild temperatures of California is to be found in the existence of the great ocean which lies to the west and in the fact that the winds blow from the ocean to the land. The temperature of the water of the Pacific varies little from 55 during the year, in some places it is less and in some places more, but everywhere it is relatively constant through the year. The air lying over this great body of water has nearly the same temperature as the water, but were it not for the westerly winds the climate of California would be as little influenced by the Pacific as the Eastern coast is influenced by the Atlantic. It is the westerly winds which bring the mild ocean air to the land and give California its cool summers and warm winters.

TEMPERATURES OF CALIFORNIA COAST AND EASTERN POINTS

AVERAGE FOR THE YEAR

Latitude (Approximate)	*California Coast*		*Atlantic Coast*		*Mississippi Valley*	
41° North	Eureka	51°	Boston	49°	Chicago	49°
38° North	San Francisco	55°	Baltimore	55°	St. Louis	56°
34° North	Santa Barbara	60°	Wilmington	63°	Memphis	61°
32° North	San Diego	61°	Savannah	66°	Vicksburg	65°
AVERAGE FOR THE COLDEST MONTH						
41° North	Eureka	47°	Boston	27°	Chicago	24°
38° North	San Francisco	50°	Baltimore	33°	St. Louis	31°
34° North	Santa Barbara	54°	Wilmington	47°	Memphis	40°
32° North	San Diego	54°	Savannah	50°	Vicksburg	47°
AVERAGE FOR THE WARMEST MONTH						
41° North	Eureka	55°	Boston	71°	Chicago	72°
38° North	San Francisco	59°	Baltimore	77°	St. Louis	79°
34° North	Santa Barbara	67°	Wilmington	80°	Memphis	80°
32° North	San Diego	69°	Savannah	80°	Vicksburg	80°

Valleys—The topography of California plays an important part in the temperature conditions of that portion of the State away from the immediate coast. A glance at the map will show that the mountains are for the most part unbroken ranges nearly parallel to the coast. The great valley of California, drained by the Sacramento and the San Joaquin rivers, is by far the largest, but Salinas Valley and the smaller valleys tributary to San Francisco Bay are of much the same general character. These inland valleys are sheltered from the ocean winds and show a marked difference in temperature and humidity from the coast region. While on summer afternoons the coast is cool and foggy, the valleys are warm and dry. In the great valley especially, summer afternoon temperatures are exceedingly high; at Fresno a maximum temperature of 115 has been recorded and temperatures of from 100 to 110 are not uncommon in the great valley and by no means unknown in the smaller valleys. The high temperatures occur with very low humidities, so that the thermometer is not a wholly fair indicator of the conditions, which are not nearly as oppressive as temperatures considerably lower in other parts of the country. The cooling during the night is very great, the difference between the highest and lowest temperatures in twenty-four hours frequently amounting to 40 or more. Frosts occur frequently during the winter months; the first killing frost occurs about the first of December and the last about the end of March, but the occurrence of frost is widely different in different localities and in different years.

In the valleys south of the Tehachapi Mountains the minimum temperatures are not as low as in the great valley and the maxima are scarcely higher except in the desert regions to the east.

Deserts—The term desert has lost its terrors for Californians because of the fact that some of the most fertile regions of the State are properly classed as desert. The most spectacular of the desert regions is Imperial Valley, which is now a prosperous agricultural district with no less than five flourishing towns, although this region was an almost waterless waste as recently as the beginning of this century. The regions of the State known as desert are the whole southeastern portion except the region between the mountains and the ocean, and also the region east of the Sierra Nevada, known as Owens Valley.

This region is one of high afternoon temperatures and extreme dryness; the highest temperatures in the United States occur in this part of California; temperatures as high as 130 have been recorded in the Colorado Desert and a temperature of 134 was recorded in the shade by standard instruments under weather bureau conditions on July 10, 1913, at Greenland Ranch in Death Valley, which is a part of the Owens Valley region; this is the highest shade temperature ever recorded in the continental United States. In spite of this temperature and the reputation which Death Valley holds, it has been stated by the leading official of the weather bureau in California that "the records of the weather bureau uphold the belief that it is quite possible, if proper care be taken in the matter of supplies and provisions for physical comfort, to live and work in this section." This applies equally well to all parts of the desert in California. The only lack of the desert in the matter of climate is water, and where it can be supplied by irrigation, climatic conditions agriculturally are unsurpassed.

Mountains—The mountains of California are generally cool throughout the year and hence furnish the great playground for the people of the State and for others who are fortunate enough to make the trip. In winter snow occurs in the Sierra Nevada and the northern portion of the coast ranges furnishing a large part of the water supply of the State. In the valleys among the mountains the summer days are warm and the climates excellent for many varieties of agriculture.

THE ORANGE GROVES OF CALIFORNIA—FAMOUS THROUGHOUT THE WORLD

FROST

The frost problem in California is one upon which a great deal might be said. There is no part of the State which is frost free. North of the Tehachapi Mountains frosts occur every year except on the coast, and all parts of the region are subject to killing frosts from November or December to April or May, the period is a little shorter in the south and longer at the higher altitudes. South of the Tehachapi frosts occur only under particular conditions of wind and dryness so that frost may be regarded as a type of storm and can be forecasted as such, so that the necessary preparations may be made to protect against frost damage.

After a few days of a dry and somewhat boisterous north wind in the southern region of the State a clear, quiet night will result in more or less severe frosts. The valley bottoms are more subject to frost than the sides of the same valleys, as frost is mainly the result of the drainage of the cold air to the lower places. The studies carried on in this part of the State have made the prediction of frost by the weather bureau entirely practicable, and frost forecasts are now made with certainty twelve to thirty-six hours in advance of the occurrence of frost. This, together with the methods of protection in common use, have rendered damage to crops by frost one of the preventable losses and there is no reason why such damage should occur except through neglect of the proper precautions.

RAINFALL

Like the temperature the rainfall of California is the result of the position of the State. Over the greater part of the State the rain occurs in the winter months, about one-half the total coming from December to March. In the northern part of the State, July and August are usually rainless, the length of the dry summer increasing to the south where four months are usually without rain. The amounts of rain vary widely with different parts of the State, from the Colorado Desert, where the average annual amount is about two inches, to the mountains in the northern part of the State, where the amount in some cases reaches an average of 100 inches. In general there is more rain in the north than in the south, and more on the mountains than in the valleys. The streams supplied by the mountain rain and snow furnish the water for the development of the hydro-electric power of the State and for the irrigation of the drier valleys.

The rainy season is a time with a great deal of fair weather, the average for the State is about one rainy day in three during the winter months. The number of rainy days is greater in the northern part of the State and the dry summer is shorter than in the southern part. The rain comes in storms lasting from two to seven days at a time with periods of fine weather between the storms. The character of the rainy season may well be shown by the diagram of the rainfall at Berkeley in the central part of the State for the twelve months, ending June 30, 1914, when the rainfall was somewhat more than the average. This figure shows the amount of rain for each day of the year, the longer the line the more rain; the months are marked at the bottom and the number of inches of rain at the sides of the figure.

In the drier parts of the State summer rains of the thunderstorm type occur; these are sharp showers, generally of short duration, in the afternoon hours. Occasionally these showers are of great intensity when they are known as ''cloudbursts,'' and sometimes they do great damage, but the cloudburst is an abnormal thing and is a rare occurrence in any particular locality. In the mountains summer thunderstorms also occur at times.

SNOW

Snow is common on the mountains; it has an important effect on the State as upon the conservation of this snow depends the stream flow during the dry summer months. At sea level snow is rare, although not unknown.

''In no portion of the habitable globe,'' says a California climatologist, ''are seasonal rainfalls more watched and studied than in California. There are many sections of the United States where departures from normal conditions are followed with interest; but there is no district where an excess or deficiency in rainfall means more or is more directly and vitally connected with the community than in our own State.'' There is a wide fluctuation in the amounts of rainfall in different years, from scarcely more than a third to more than twice the normal. The records kept for over sixty years show that there is no regular sequence of wet and dry years or even of wet and dry months. An abnormally wet month may be followed by another wet month, by a month abnormally dry, or by a month with its normal amount, and the sequence seems to be a matter of absolute indifference. The record does show one thing very clearly and that is that the climate of California is the same now as it was sixty years ago and that the State is neither becoming wetter nor drier, but that, in spite of fluctuations in the amount of rainfall, the average remains the same, and that there are in the long run as many years of excess as there are of deficient rainfall.

FOG

In California there are two types of fog which are effective as regulators of the climate. The ''tule fog'' of the winter nights is a low-lying fog filling the valley bottoms to a depth of about a hundred feet, chiefly along the river courses; the blanketing effect of the fog often prevents frost. The foothills are for the most part above these fogs.

The other type of fog is the famous fog of the Pacific Coast; it is common from Mexico to British Columbia, although best developed in the vicinity of San Francisco. This fog, which grades into a low veil of cloud a thousand feet above the ground or less, locally known as ''high fog,'' occurs in the spring and summer months shutting off the direct rays of the sun and thus preventing high temperatures. Although often a menace to navigation and imparting a chill to the summer air which makes the Easterner shiver, the fog must be regarded as one of the most valuable of the assets of the California coast as it unites with the ocean influence to make for the cool summers of which the region is justly proud. The fogs also furnish a good deal of moisture to the trees of the region and take the place of rain to some extent.

SUNSHINE

California is pre-eminently a land of sunshine. The amount of bright sunshine in the great valley and in the desert regions exceeds 80 per cent of the daytime and even on the coast, in spite of the summer fogs, the average sunshine for the year is over 60 per cent. In San Diego, for example, there has been an average of 365 days a year when there was bright sunshine for an hour or more. In general, the sunshine of the interior portions of the State is greater than that of any other section of the United States, and greater than the Mediterranean region famous for its sunshine. The coast has about the same amount of sunshine as the Mediterranean.

WINDS

The prevailing winds of the coast region are from the west, but during the winter storms southeast winds occur. In summer the west winds blow steadily during the afternoon hours. Occasionally during the months of April, May and June the west or northwest winds reach high velocities.

In the great valley the winds are prevailingly from the north; they are occasionally strong and do damage. In the Sacramento Valley the summer winds are from the south; this well-known south wind, felt nearly every summer night, materially moderates the heat of the valley. The winds throughout Southern California are light except during occasional storms.

In general the winds of the State are cool; but the most trying climatic feature of California is the so-called "norther," or hot, dry wind from the north or northeast, which occurs in the valleys, chiefly in May, June, and July. In the southern portion of the State similar winds, known as Santa Anas, may occur in December and January. Their velocity sometimes exceeds twenty miles an hour and as much dust is carried, they are generally disagreeable. There are, however, only a comparatively few days each year when this type of wind blows.

CLIMATE AS AN ASSET OF CALIFORNIA

Among the important natural assets of California the climate ranks high. The generally mild temperatures with the cool summers and almost total absence of winter as this season is known elsewhere in the United States, the long growing season with the abundance of bright sunshine, the heavy rains on the mountains furnishing water for irrigation and for power, and the even temperature of the coast region give the State a combination of climatic conditions with which few regions can compete and which far surpass the conditions of climate under which the great mass has to live and work.

Agricultural Potentialities in California

BY DR. THOMAS FORSYTH HUNT
Dean of the College of Agriculture of the University of California and Director of the University Agricultural Experiment Stations

A FEW weeks ago I wended my way along the busy wharves of San Francisco Harbor with the quarantine officer of the State Commissioner of Horticulture. He was on his way to inspect the fruit and vegetables aboard a steamer just arrived from Honolulu. While we were on this steamer the officer pointed across the slip and said: "Do you see that boat?" It was the freight steamer *Pennsylvania*. "Just sixteen days ago," continued my guide, "that ship was tied up in the North River, New York Harbor. It carries 8,000 tons net." A few days later I met the Secretary of the Chamber of Commerce of San Francisco. "We now have a rate of 30 cents a hundred on canned goods from San Francisco to New York by way of the canal," he said. "The former railway rate was 90 cents. For the first time in the history of this coast we are now able to sell canned goods in Southeastern United States," he added.

By means of the San Joaquin and Sacramento rivers, as well as by four railway systems, the fertile interior valleys of California have potentialities possessed by few, if any, regions in the world. Fifty to $100 worth of farm products per acre is not uncommon with irrigation; in fact it is almost common. Leasing land at from $15 to $25 per acre is a favorite pastime. When shipped in sufficient bulk from river landings, 6 cents moves 100 pounds of freight by water from the center of this great area to the San Francisco Bay, while 30 to 50 cents additional sends it, in sixteen to twenty days, to the Eastern seaboard. By cutting the American continent in twain, California has been placed in the front yard of New York; when fast passenger steamers are placed in service we will be on the front porch.

I have been greatly interested in three tracts of land. On of these tracts is in the nine North Atlantic states, the six New England states plus New York, New Jersey, and Pennsylvania. It is a tract of 100,000,000 acres. The second tract is California. It is also a tract of 100,000,000 acres. The third tract which has interested me is a tract of land belonging to one Mr. Terrazzaz, now sojourning in El Paso, Texas, for reasons with which we are not concerned in this article. It occupies about three-fourths of the state of Chihuahua. It is said to be a tract of 100,000,000 acres. The first of these tracts, the nine North Atlantic states, contains 25,000,000 people. The second tract of equal size, California, contains 2,500,000 persons. I do not know how many people live on the 100,000,000 acre Mexican ranch, but suppose, to make the picture complete, that there are 250,000 souls. There are single counties in California that, if thy were as densely populated as Massachusetts, could hold the present population of California.

The 25,000,000 people of the North Atlantic states are better fed, better clothed, better housed, and better educated than when there were only 2,500,000 inhabitants. It is not asserted that this is due necessarily to the greater population, but that it is true in spite of it. Some day, probably within the life-time of persons now living, California will contain not less than 10,000,000 people. When that day comes we can expect them to be better fed, better clothed, better housed, and better educated than the present population, which perhaps has no superiors at present in these particulars in the world.

The greater population of the North Atlantic states is due to the fact that those states face upon the same ocean as the countries of Europe. These states have had their wealth created by the vast number of immigrants without having the expense of raising them to the wage-earning age. Had the Pacific Coast states, with their fertile soils, rich ores, vast water power, and unexcelled climate faced the Atlantic Ocean, they might now contain 40,000,000 people instead of 5,000,000. It costs an immigrant two and one-half times as much to reach San Francisco from Genoa as it does to reach New York. Fifty years ago the differential was vastly greater. As soon

CALIFORNIA'S RECORD, $6,000,000 WORTH OF BEANS PRODUCED IN ONE YEAR

as boats begin to run directly from Bramerhaven or Naples to San Francisco by way of the canal, it will probably cost the immigrant only fifty per cent more to reach the Western coast than the Eastern coast. It is not necessary to assume that more immigrants will come to America, but merely that they will be differently distributed.

In 1910 17,000,000 acres of the 28,000,000 acres of the farm lands in California were held in ranches of over 1,000 acres. It is estimated that there are 50,000,000 acres of land in California suited to agriculture. Only six per cent of this area, or three per cent of the total area, is held in farms of under 175 acres.

There is a certain county in California containing 805,760 acres, which in 1910 was reported to contain 663 farmers. The total area in farms was 491,198 acres, or 741 acres per farm. A small reclamation project has been developed in this county. Settlement began in 1911. Two hundred and sixty families now occupy 8,000 acres, 7,400 of which are under irrigation. It is estimated that in 1914 $100,000 worth of a single product —butter fat—was sold from this area. There is nothing to prevent the sale of $500,000 worth within five years. The bank in the town adjoining this project has 1,575 depositors with deposits aggregating $404,000. Note that this is less than one per cent of a county which in 1910 was reported to contain 663 farms.

When this 8,000 acres was a sheep ranch it may have brought in 10 cents an acre. It now contains about 260 thirty-acre farms, each with a family averaging four and one-half persons. The people of the project recently sent a representative to Washington to say to Secretary Lane that they had no complaints to make. If this were not an unusual case it would not have been quoted here. Nevertheless it illustrates the agricultural potentialities of California, because this instance may in the future be duplicated many, many times, if only the right methods are employed.

The citrus industry offers a further illustration of what may be accomplished. In 1890 there were 4,000 carloads of oranges and lemons shipped from California. In 1914 nearly 50,000 carloads were handled. Last year the consumers paid $86,000,000 for the citrus fruit raised in California. It is estimated to have been raised on 125,000 acres. When this fruit was hanging on the trees it was worth twenty-five per cent of what the consumers paid for it and it is estimated to have given employment to 8,000 families. How many families were supported by virtue of the remaining three-fourths which the consumers paid can only be surmised.

Like all other places, California has two sides to its shield. Success depends upon knowing what is on both sides of the shield. In California, as elsewhere, too many people have been living off the increased value of the land and unfortunately have been living off this increment before it was earned. Some people look upon this as a local phenomenon. While it may have received greater emphasis here than elsewhere, it is only a part of a widespread disease. This unearned increment has made possible the extravagant living for which the past fifteen years have been noted. Few people can live extravagantly unless they issue their promissory note against the future.

It is not that the wholesale price of land is too high in California, but the overhead charge of dividing up these lands and finding settlers has been too great. Nowhere has the art of selling been developed to a greater degree than in California. Often the art of buying has not been equally developed in the newcomer. The goods are here but sometimes the buyer does not find them. Not infrequently the seller displays his shelf-worn articles.

REASONS FOR ERROR

Buyers have commonly been led into error for the lack of understanding three factors:

1. The time required to make a farm a going concern.
2. The value of a dollar.
3. The requirements of a successful farm.

When fifty years ago the pioneer went into Iowa he had only to turn the furrow in order to seed to oats or plant corn. In from three to six months he deposited in the bank the cash for the crop. When his son came to California, he found conditions different. In an irrigated region, water must be brought to the tract, the land must be leveled and checked before a crop can be started. While a slight return may be made the first year a going concern can not be made with a piece of raw land under irrigation short of two years and in some of the more profitable lines it takes from three to five years. The less capital to start with the longer it takes.

A dollar does not go as far in the Pacific Coast states as it does in the older and more thickly settled ones. Labor is higher. The cost of long hauls must be added to the cost of materials. It will all come back in the end if wisely expended, but this does not help the man while he is getting started. I received a letter from a prospective settler in the Middle West who had a couple of thousand dollars to invest. He said he had read in the highly colored prospectuses of leading development firms that anything could be raised from a bean to a fig tree. He appealed to me for some believable information concerning the products of California. It was necessary to say to this prospective buyer that it was perfectly true, in California anything could be raised from a bean to a fig tree. Further that what was said in the highly colored literature which he had received was quite possible, but it was not evidence that he could make a living on a farm in California. His success would depend wholly upon his wisdom in purchasing and his own ability as a farmer.

There is an old English saying which reads, ''If wishes were wagons, beggars might ride.'' It takes more than a wish to become a successful farmer. If it were not so there would be more competition in farming than there is at present. Oftentimes a competent man could make a living where another has made a failure, but the man who is competent to make a living under the particular conditions would have known enough to have purchased elsewhere. Many persons have no adequate conception of the requirements of a successful farm. Neither will this article undertake to list them, but this much may be said, that it is not the yield per acre nor the per cent earned on the investment that makes a successful farm. It is the income per unit of labor. Neither is this income to be reckoned wholly in dollars and cents; it comes in certain human satisfactions that no money can buy. In these latter respects few, if any, places have greater potentialities than California.

Why California Leads the Entire World in Fruits

By E. J. Wickson

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Recognized authority on Horticulture in California.*

CERTAIN facts which are of great interest and importance in connection with fruit growing in California are these:

First. Fruit growing and the preparation of fruit products constitute the leading industry of California. The output, from its beginning on a commercial scale about 1880, reached a product value of $29,019,236 in 1899 and of $50,706,869 in 1909—an average increase in value of about $1,500,000 per year during its first two decades and about $2,000,000 per year during its third decade. These valuations are from the United States census of 1910 and they distinguish California as the greatest fruit growing state of the Union. They represent the "farm value" of the fruit as it comes from the tree or vine. The product as it appears in the markets of the world in various forms, is conservatively estimated to possess a value of $100,000,000.

Second. The reasons for this eminence of California in fruit growing are several:

a. The possession of climate which insures the life and thrift of the tree or vine. This can be appreciated when it is understood that, except at elevations greater than those chosen for fruit planting, there is no cold severe enough to freeze the ground and no winter killing of trees. Temperature injuries to fruits are confined to the effects of "frosts," and "freezing" (which is popularly considered to mean the freezing of water), is seldom encountered. By the use of orchard-heating devices, invented in California, with petroleum fuel, which is very abundant and cheap, because the State is the largest oil producer in the Union, "frost" injuries are demonstrated to be preventable.

b. The length of the growing season, the absence of summer rains, the brilliance of the sunshine and the adequacy of sun heat promote size, beauty and quality of fruit and favor the manufacture of evaporated fruits at a minimum cost.

c. The combination of conditions, which befit the growth of both semi-tropical and temperate zone fruits, gives California command of a variety of fruits which no other state possesses and which California manifests in fullness and perfection. This will appear more clearly as the different fruits are separately discussed later in this paper.

d. The occurrence in California of vast areas of deep, loamy soils, rich in plant food, easy to cultivate, and encouraging root growth to a depth of ten feet quite generally and occasionally twice and even thrice that depth, as shown by actual digging. Though this is true it is also true that shallower soils are successfully employed in growing fruit.

Third. Aside from natural conditions of climate and soil, fruit growing has reached its present eminence in California through the high intelligence, energy and business ability which are found in the agricultural population of the State. These qualities of citizenship have made it possible to develop methods of growing, preserving, and distant marketing of fruits which are new and characteristic of California. The employment of these methods coupled with the acceptable nature of horticultural work and the opportunity to pursue it nearly the whole year, renders it possible for a horticultural worker to accomplish with ease and comfort twice the work which can be compassed in climates which add the embargo of winter to the depression of hot, moist summer weather.

Fourth. But after all, probably, the underlying secret of success in California fruit growing is the conception of the tree or vine as a producing machine which must be developed and maintained in the highest degree of efficiency. It is this conception of the grower's relation to his trees and the discharge of the duties which such relation requires, which has brought to California fruit growing such notable success and wide repute.

Fifth. California fruit growing has reached its present eminence because of the wide application of business principles in production and in trade. Many of the leading fruit growers were formerly prominent and successful in manufacturing and commercial affairs in the East and abroad. They brought to California the wisdom born of experience. They invented new processes and appliances and they applied the most advanced commercial methods. They matched the favoring natural conditions of soil and climate with their own skill and energy in using them to the best advantage. They have demonstrated the advantage of co-operative organizations for handling fruits in the packing house and in the markets so clearly that California methods are commanding attention in all parts of the world. These facts are set forth in detail by other writers in this publication.

VARIOUS FRUITS COMMERCIALLY GROWN IN CALIFORNIA

To show the relative importance of various tree fruits chiefly grown for commercial purposes, the following figures are compiled from reports by the county horticultural commissioners which are published in detail by the State Commission of Horticulture at Sacramento. The estimated weight of the grape product is based upon the 1913 report and is by the State Board of Viticultural Commissioners:

ESTIMATED PRODUCTION OF LEADING CALIFORNIA FRUITS

	Tons.
Almonds	3,752
Apples	100,443
Apricots	93,189
Cherries	10,646
Figs	6,948
Lemons	56,837
Olives	8,574
Oranges	568,521
Peaches	340,351
Pears	53,483
Plums	34,769
Prunes	95,512
Walnuts	9,231
Grapes	900,000
Total	2,282,283

To present with as much definiteness as possible, information about California fruit growing, a few of the leading facts about each of the fruits will be given under its own name and, for convenience, an alphabetical arrangement will be followed in each of the groups into which the fruits naturally divide themselves.

DECIDUOUS ORCHARD FRUITS

Apple—California has about 3,000,000 apple trees in orchard, of which one-fifth are not yet in bearing. The success attained in growing a winter apple very satisfactory to the trade and capable of distant shipment constitutes this fruit one of the most promising and popular at the present time. About 1,000 carloads are shipped beyond state lines and a considerable quantity reaches the London market, selling at the highest prices. There are two distinct branches to the apple industry of California; one is the growing of early varieties like the Astracans and Gravenstein for sale in the northern parts of the Pacific Coast and the interior mountain states before the earliest apples can be ripened in those parts. The localities where the early varieties are chiefly grown for such shipment are in the Sacramento Valley and the foothills surrounding it. The forcing heat of the spring and early summer brings these varieties quickly to notable size, crispness and flavor. This heat, however, continued into the summer and autumn, makes the same districts quite ill-suited for the growth of winter apples which are prematurely ripened and lack quality and keeping power. The second branch of the California apple industry, then, the production of winter apples, is undertaken in parts of the State quite different in climate from that of the early apple regions. The requirements of a winter apple are fully met by two main divisions of the State, viz.: The smaller valleys close to the coast; in fact, in some cases the coast flats, where the exposure is directly toward the cooling breezes of the ocean which produce a cool summer—a long, slow-growing season which develops the greatest beauty and highest quality in a winter apple. Similar results are also produced by the climate found at an elevation of from 2,500 to 5,000 feet on the interior plateaus and in the mountain valleys. The coast district has developed a greater commercial apple industry than the mountains because transportation facilities for shipment are vastly better, but as the State advances the mountain districts will be employed in this production much more largely than at present. The greatest apple district of the State is the Pajaro Valley, including parts of Monterey and Santa Cruz counties, centering at Watsonville, which ships about 4,000 carloads of apples annually. The counties next prominent in apple growing are Sonoma, Mendocino, and San Luis Obispo, while many other counties have good apple orchards in less total acreage; in fact, from San Diego on the south to Siskiyou on the north, localities exist which afford the elevation or the coast exposures which favor the production of good winter apples and planting is progressing in all these districts.

Apricot—California apricot trees stand in the open air without protection of any kind and bear large, luscious fruit. That apricot trees can do this constitutes one of the unique features of California fruit growing and proclaims it different from fruit growing in other states, for excepting a few localities in other parts of the Pacific Slope, California has a monopoly of commercial apricot growing. And yet the apricot does not find all parts of California suited to it. The whole northwest quarter of the State, north of San Francisco Bay, and west of the high ridges of the Coast Range, does not grow apricots commercially, nor does this fruit anywhere ascend above an elevation of 1,500 feet upon the foothills. It is particularly a fruit of the protected coast valleys south and east of the bay of San Francisco to the southern end of the State; also of the great interior valleys and lower foothills, avoiding, however, the low places in these valleys where spring frosts may injure the crop, though the tree is not harmed. For these reasons it is wise to choose locations for the apricot with some discrimination, but such large areas of land are practically safe that the present great product can be several times multiplied if the world's markets should favor it. The California apricot is of superior size and quality and in canned and dried forms is finding a free field in the countries of Northern Europe for any surplus which is not required in the United States. A point of advantage with the apricot, as with the pear and peach, and to a less extent with the nectarine and plum, is that it has three great lines of demand:

First, as fresh fruit; second, as canned fruit; third, as dried fruit. The tabulation given later in this article shows the relative amount of each fruit taking these forms. More than 3,000,000 apricot trees are growing in California; counties having over 100,000 trees each are as follows: Santa Clara, Solano, Ventura, Riverside, Kings, Tulare, Yolo, San Bernardino, and Alameda, while several other counties closely approach that limit. Some of these counties are 500 miles apart and their success with the apricot shows how widely suitable locations are distributed over the State.

Cherry—The cherry is one of the lesser orchard fruits of California because the regions which favor it are fewer and because its commercial field is less, but in size and quality of the fruit and prolific bearing of the tree, the cherry is a great fruit in locations which meet its requirements. The cherry requires a modification of summer heat and of the dryness of summer air and for these reasons it does not thrive on the interior plains, even when irrigation is employed to regulate soil moisture. In the central coast valley and in the smaller valleys tributary to the great Sacramento Valley and on the river lands, where depth of soil prevails and modification of air dryness is secured by abundance of adjacent water, the cherry behaves magnificently. Elevation also secures conditions suitable to the cherry in some cases, notably in Southern California, where the product of trees in mountain valleys at an elevation of 2,000 feet or more, is satisfactory and profitable though the trees on mesas below, where citrus fruits thrive, are disappointing. There are nearly a million cherry trees in California, of which Santa Clara, Alameda, San Joaquin, Solano, Napa and Placer counties have the largest plantings. Cherry drying has never prevailed in California. The shipment of fresh fruit to the East has overcome its chief difficulties and is now regularly established. Cherries are constantly growing in volume as canned fruit. The acreage at the present time is extending on the basis of the shipping and canning demand.

Peach—The peach is the greatest orchard fruit of California of the deciduous class. A few years ago it was surpassed in acreage by the prune, but the prune was over-planted in situations not befitting it and such unwise extensions of the prune planting have largely disappeared. This restores the peach to the supremacy which it held previous to that unfortunate incident, as it has had no reverses, but has rather gained continually in popularity in spite of occasional low prices. The peach has a very wide range in California. It goes beyond the apricot in the coast valleys north of San Francisco; it goes beside the apricot wherever the latter thrives in the interior, rises a thousand feet above it on the foothills and goes lower on the plains into the frosted areas with safety because of its later blooming. The peach is a grand fruit almost everywhere; it has a ripening season with different varieties and different locations from May to December, though, of course, the midseason varieties constitute the great commercial crop. The varieties most largely grown are of California origin, being chiefly selected chance seedlings, taken up by enterprising nurserymen on the approval of growers with whom they originated. These varieties have gained fame by embodying qualities acceptable to three main lines of disposition indicated in the table of ''Commercial Uses of Various Fruits,'' near the close of this article. These peach products are derived from nearly all parts of the State, though mainly from the great interior valleys, the San Joaquin and the Sacramento, and the foothills. Fresno County leads in peach production, while Placer, Tehama, Santa Clara, Solano, Stanislaus and Kings have over 500,000 trees each, and Tulare, San Joaquin, Merced, and Butte counties have over 200,000 trees each. About ten other counties go above the 100,000 mark. The California peach, though it is now eminent, has even a greater future before it, in spite of the fact that peaches are being widely grown in other parts of the country, because the California peach has such a long ripening season and is so superior in size and texture for preserving processes.

Nectarines—The nectarine is a smooth skinned peach, but it bears no comparison with the peach in product or popularity. The canned and dried products of nectarines are too small to separately mention, but California produces a magnificent nectarine, and the demand for the fruit may at some time better justify producing effort.

Pear—Because of conditions favoring the growth of pears of the most popular market sorts in greater beauty and volume than they can be produced in older states and countries, the California pear has commanded wide attention in distant parts of the United States and, like the apple has commanded the highest prices for the fresh fruit in the London markets; in fact, the pear stands next and sometimes exceeds the peach in long distance shipping trade. The pear also is high in canning and in drying, the product has been large in some years though recently there has been little of it, because of high prices paid by shippers and canners. The pear resembles the peach in its wide range over coast valley, interior valley, and foothill situations, but it extends beyond the peach, for it goes to an altitude of 5,000 feet on the mountains and it descends to the lowest places in the valleys, for neither frost nor standing water can avail against it. It escapes frost by its slow start in the spring and it endures water and even a degree of alkali in the soil by the hardy character of its root. In ripening also it is not injured by a degree and duration of heat which ruins the quality of a winter apple. Until about a decade ago the pear was free from the ''blight'' in California and there seemed no limit to the possibilities in pear growing. Since then the disease has wrought havoc and many growers have abandoned the fruit rather than fight for it, but those who wage successful warfare are greatly profited. The leading pear counties are Solano, Santa Clara, Placer, Sacramento, El Dorado, Tehama, Nevada, Sonoma, Contra Costa, Yolo, Yuba, etc., but almost every county in the State grows the fruit in commercial quantities. The varieties grown are comparatively few and the Bartlett is chief, because there are fully two months between the first to mature in early districts and the last in late districts and during all this time supplies are ready for shipping and canning of this one exceedingly acceptable variety which permits no intruders while it is in season. The growing of later pears is limited, because the Eastern grown winter pears are usually available in large quantities in the Eastern markets after the California Bartlett has had its run. Still, a few shippers are making excellent records with winter pears in distant markets.

Plums and Prunes—By demonstrating the suitability of the climate for the free fruiting of the choicest varieties even of the European plum, California growers freed themselves from the burden of building up on the basis of the wild American species which Eastern growers have done with so much credit to themselves. California has no need to seek hardy plums for the tenderest are perfectly satisfactory; nor does California have to circumvent the curculio and the black knot for these have never appeared in the State. The French prunes were introduced at an early day and the product was so successful and profitable and won its way by displacing European prunes in American markets that there arose ere long a rage for prune planting, the product of which, arising to 205,000,000 pounds of dried prunes in 1912, has outgrown the requirements of the United States and is being pushed for sale in Europe, even in France itself. Probably even greater success than could have been anticipated has been attained in disposing of this immense volume of prunes and yet as free and profitable an outlet as is necessary has not been secured. When there is a year of maximum product the price is apt to run low and acreage has been somewhat reduced (as stated in the foregoing discussion of the peach), therefore an attitude has reasonably arisen against prune planting except where an exceptionally large fruit can be counted upon. Strenuous efforts are being made to popularize the prune as a desirable food, to push the product into markets in all parts of the world and to realize fair returns for such an excellent fruit as the California prune is conceded to be and progress is steadily being made. California has invented new processes of curing prunes by machinery and other labor saving appliances and has endeavored by human devices to match the economy of production to which Nature contributes free sunshine and dry air. Probably nowhere in the world can so rich and delicious a fruit food as the California prune be so cheaply produced and it is warranted to expect that the world will need all that can be produced when organization for distribution and trade is made effective. The largest prune producing counties are Santa Clara (which has nearly two-thirds of all the prune trees in the State), Solano, Napa, Alameda, Sacramento, Tulare, San Benito, Colusa, etc.—both the coast valleys and the great interior valleys participating in the production. The interesting story of the prune is ably told by Mr. Brooks of San Jose on other pages of this publication.

Of plums, aside from varieties which are dried without removal of the pit (and therefore called prunes), the production is relatively about one-eighth that of prunes and is largely restricted to the Japanese and a few other varieties which are particularly adapted to fresh fruit shipments and canning. These fruits are largely grown in the districts where early ripening can be counted upon. The special discussion of shipping plums by Mr. McKevitt, a leading grower and shipper, will be found very interesting. The size and beauty of the canning plums of California are striking and the product reaches a good volume.

NUTS

Almond—California produces practically the whole of the almond crop of the United States and thus stands as the only source of a home-grown almond supply for American markets. The article by Mr. Pierce on other pages of this publication discusses both production and distribution, in both of which he holds prominent position. It must be emphasized that the almond is a fruit demanding much intelligent judgment from the grower. There is considerable irregularity in the annual crop, as some districts are liable to frost injury. The almond is a very restless tree during the California winter because the temperature in the valleys is always near the point which induces blooming and rather a light frost may injure blossoms and young nuts. For this reason it is very important to select locations for almonds where there is a minimum danger of frost. These are found on the bench lands around small valleys, while the bottom lands in the same valleys might be quite frosty and should be planted with later blooming fruits. Frosts are also less frequent on the plains of the interior valleys where there is a free circulation of air which tends to equalize temperatures, while on the river bottom lands the trees may be unproductive though growing thriftily. The almond does not thrive at elevations in the foothills and seems to be a bench and valley fruit, but even within these limits locations must be chosen with close attention to local topography. The chief product is grown in Yolo, Contra Costa, Solano, San Joaquin, Sacramento and Alameda counties, which are all in the central and northern regions of the State, although many other counties contribute in a smaller way, including Riverside County, and large plantings have been recently made in San Luis Obispo and counties on the coast in the southern half of the State. The wide distribution of the product shows that local conditions rather than wide geographical generalizations should be studied.

Chestnut—The California chestnut product is small and consists almost entirely of the Italian variety grown in the interior valleys and foothills. The production of the best chestnuts of American and European varieties can be largely and profitably increased, but no particular attention has been paid to the matter, except by a few enterprising growers.

Peanut—On light loams all through the lower lands of California the peanut thrives well and makes a large product of exceptionally large, bright and well-filled nuts. In Southern California the chief product is on the lower lands of the coast region, while in Central and Northern California, peanuts are mostly grown on the alluvial loams of the river bottoms of the Sacramento and San Joaquin valleys, although the crop is sometimes made between fruit trees on the light upland loams. The product has been quite profitable to those who have mastered the details. California has, however, had little inducement to enter into competition in the general markets of the country, and the crop is now hazardous, because of reduction of duties on importations, even for local consumption. At present only a small fraction of the peanuts used in California are grown here.

Pecan—The pecan grows well and bears well in the lower lands of the interior valleys. It does not behave well near the coast where the seasons are not well defined, nor does it thrive in the drier regions of the interior. On deep lands, however, where moisture is ample and where the approach of autumn is marked by rather sharp frosts, the pecan stops its growth and matures its nuts satisfactorily. The product has not yet risen to commercial importance.

Walnuts—The English walnut is the greatest nut grown in California, judged by the volume and value of the product, by the breadth of its adaptability to California conditions and the greatness of its outlook as discussed on other pages of this publication by Mr. Thorpe, who occupies an important relation to the marketing of the product. The present product is almost entirely grown in three counties in Southern California: Orange, Los Angeles and Ventura, and the adjoining counties of Santa Barbara and San Luis Obispo stand next in acreage of walnuts. During the last few years, however, owing to the profitability of the walnut, there has been a large planting in the central part of the State and the product of the future will be drawn from a wider territory than hitherto. The walnut tree is in fact content with the coast, interior valley and foothill climates, providing it has sufficient depth of soil to sustain it and to furnish the constant, but not excessive, water supply which it needs. Where the rainfall is large and the soil deep enough to retain moisture and yet open enough to prevent standing water, walnuts yield satisfactory results without irrigation. In places with light rainfall or where the soil is too shallow or non-retentive to hold moisture for the long growing season, irrigation is requisite. There is, however, need to select varieties with some regard to localities. In Southern California a local seedling, known as the Santa Barbara soft shell, is chiefly grown. This variety is not so well adapted to conditions in the upper part of the State. The French imported varieties, the Franquette, Mayette, etc., and some California seedlings locally originated are better and are now being largely planted. These varieties are hardy against spring frosts because of their later blooming and they resist the sun heat of the interior. The Southern California variety is injured by these agencies, but as they occur only at a minimum in the Southern California coast regions, the resistance of a variety is not of as much concern. The later blooming varieties are also less injured by the walnut blight—a bacterial disease which sometimes does considerable injury to the nuts.

THE GRAPE AND ITS PRODUCTS

The grape grows in all parts of California from near sea level on the coast to an elevation of 5,000 feet or more on the mountains. It is contented, too, with nearly all fertile soils from the deep valley loams, where the great fat, firm-fleshed grapes are grown for raisin and table purposes, to the shallower soils of the high foothills and mountain slopes, where the grapes are less in quantity, but of superior aromatic qualities. This wide adaptation gives an immense area suited for grape culture, but the chief reason for the achievement and the promise of the grape in California is in the fact that the European species, *Vitis vinifera*, thrives and thus the California grower has command of all that the Europeans have accomplished in centuries in the development of special varieties of the species for special purposes. The grapes of the states east of the Rocky Mountains are not grown in California because the European varieties are the only ones from which raisins can be made; they also furnish the world's wine and brandy and they give size, beauty and shipping quality beyond all comparison with American varieties. Wherever wealthy Eastern connoisseurs choose grapes for their glass houses they select European varieties. The Californian grows his "hot house grapes" in the open air. He also grows them without the cost of trellising, because most of the European varieties will bear well in short-pruned bush form and the others accept a high stake or a two-wire support. Details of the grape interest are given on other pages of this publication, Mr. Madison for the raisin branch and Mr. Sheehan for the wine and brandy industry. Briefly, however, it may be noted that table grapes are grown for local use everywhere and for shipping chiefly in Sacramento, San Joaquin, Tulare, Placer, Fresno, Stanislaus, Santa Clara and San Bernardino counties, though other counties participate in this branch. The raisin interest is chiefly concentrated in the center of the San Joaquin Valley in Fresno and Kings counties, though there is a raisin product of some moment in the Sacramento Valley and in Southern California. The wine and brandy interests are widely distributed through the length and breadth of the State.

SEMI-TROPICAL FRUITS

Space will admit only of reference to those fruits of the semi-tropical class which have reached considerable commercial importance. Others which are at present succeeding with amateurs, and some of which may ere long reach economic account, are too numerous for discussion. Suffice it to say that the date matures freely in central parts of the State. The banana is fruited for home use in many thermal situations. The pineapple is grown in a small way in frostless places near the coast in Southern California. The cherimoyer is found in the markets of Los Angeles, while the avocado or alligator pear, grown in Southern California, reaches the markets of San Francisco as well. The latter fruit is quite hardy in several parts of the State and has recently been quite widely planted. The guava and the loquat are produced for local use and sale and new varieties of the latter originated in Southern California are becoming widely known. The persimmon and pomegranate grow in nearly all fruit districts, but only a limited amount can be profitably disposed of, either locally or by distant shipment. Many other fruits of the semi-tropical class may be found in the citrus districts.

Fig—The fig is one of the great fruits of California. Old trees attain the dimensions and aspect of oaks and bear so much fruit that it becomes of some importance in swine feeding. The tree is perfectly hardy in all coast and interior situations (except in a few places where the temperature falls 10 or 12 degrees below freezing) and no thought is given to protection. This fact, demonstrated more than a century ago by the padres at the old missions, naturally suggested the fig as a great commercial fruit and for decades it has been successfully grown and trees of considerable age can be found in nearly all counties except those of the mountains. Production has, however, been restricted by the fact that fresh figs do not take kindly to long shipment and by the fact that until recently our dried figs have not compared well with the product of Smyrna. This condition has, however, been completely changed by the experience of the last few years as described by Mr. Roeding in a special article on this subject. The fig industry comes upon a new basis through the successful introduction of the pollination insect which is essential to the success of the Smyrna fig. California-Smyrna figs are now being produced in considerable quantities and California is thus equipped to enter into competition with the time-honored Asiatic product for the world's trade in dried figs.

Olive—The olive is another fruit which has been successfully grown in California for more than a century. The importance of the olive as a food in the south of Europe and its standing as an export thence to populous northern countries, coupled doubtless with its favored place in song and story, induced a premature popularity among California fruit planters, and experience with the fruit for a number of years did not justify all the expectations cherished for it. Planting practically ceased for a time and considerable acreage was displaced. Recently, however, through the action of the pure food laws, which have prevented the use of the word "olive" in connection with cheap substitute oils for salad purposes, and through the process of canning and bottling hermetically, which has made it possible to produce pickled ripe olives of suitable varieties with good keeping qualities, the olive has found itself in our commercial fruit growing and has a bright future, as described by Mrs. Ehmann in a special article on this subject. California is now producing, large and profitably, good olives and olive products in suitable places through the efforts of masterful men and women who have risen to the requirements of this fruit, in the production of which California has almost a monopoly of favoring climatic conditions. Practically all the counties of the State except those on the high mountains and on the upper northwest coast, have olive trees in bearing—the interior valleys and foothills of the Sierra Nevada leading in the production.

Lemon—Wonderful progress has been made in developing the lemon industry in California and imported lemons have met sharp competition in the markets of the United States by the California product. New varieties have been secured, new methods of culture and fruit handling have been devised. Though lemon growing is possible in most sections where oranges are produced, the present product is chiefly made in the counties of Ventura, Santa Barbara, Orange, San Bernardino, Riverside and San Diego. The lemon does best in a practically frostless place, being more tender than the orange. For this reason the chief product is in the southern coast counties. In suitable situations in the interior, however, the lemon does well, but has been largely displaced by the orange, which has been on the whole more profitable and is marketable fresh from the trees, while the lemon requires curing and a good part of the crop has to be held from winter maturity to be sold in the following midsummer, when the chief demand for lemons occurs.

Orange—California has accomplished more with the orange than with any other single fruit, and the advance during the last few years has been exceedingly rapid. At present, not only is the United States largely supplied with California oranges, but the fruit has been successfully sold in England and Germany. For many years nine-tenths of the vast production of oranges came from Southern California, but recent plantings have been largely on the mesas of the San Joaquin and Sacramento valleys and in the central part of the State. The orange thrives in suitable situations through a north and south distance of over 600 miles, and the topography of the State is such that similar winter and summer temperatures occur all through this distance. There is, fortunately, however, some difference in the ripening of the fruit in the different portions of this belt and the northern portion, because of its mountain environment and distance from the ocean, has an earlier spring and summer and is, therefore, able to ripen its oranges for an earlier autumn market. This difference distributes the fruit through a greater number of months and is of great advantage to the product. In fact, by choice of early and late varieties and by using the variation in the season of maturity, California can furnish fresh oranges in large quantities all through the calendar year and can make the United States practically independent of importations. Another advantage peculiar to California is that the orange grown in a dry summer is more dense in texture and has much better keeping and shipping quality than an orange grown in a humid summer. The fruit is also more sprightly and refreshing, and though there is some controversy over the alleged superior sweetness of the Gulf fruit, the popularity of the California fruit and prices which it commands are evidence of its wide popularity. Although the California growers have made the most energetic and systematic effort for the wide distribution of the product for several years the fruit has proved so acceptable that it is evident that the limit of consuming capacity of the United States is still beyond reach and the outlook for the California orange is very promising. The articles by Mr. Wallschlaeger and Mr. Powell show the nobility of the product and the enterprise with which it is being handled.

The pomelo or grape fruit is also grown in California, but has not yet met the extent of demand which was anticipated.

SMALL FRUITS

In California the term "small fruits" signifies only berries and currants, as the cherry is always classed by us with other great orchard fruits, and the grape stands alone as the foundation of a great fruit industry, as has been indicated. Aside from supplies for home use and local markets, there is a large field for small fruit growing for shipment. Berries are largely used by the canners. Small fruits are also shipped from California to markets from one to two thousand miles distant in the interior states and territories to the north and east. The earlier ripening of these fruits in California gives our shippers an opportunity to place the product in this vast region, although there are home grown supplies later in the year. The growing of small fruits is scattered over the State and the special regions are widely distant from each other. The most prominent for strawberries are the San Gabriel and San Fernando valleys in Los Angeles County, the Pajaro Valley in Santa Cruz and Monterey counties, and the Florin section in Sacramento County. There are, however, many places which have a smaller acreage, but special reputation for fruit out of season; in fact, it is possible to find ripe strawberries every month in the year at some point or other in the State.

DIMENSIONS OF THE CALIFORNIA FRUIT INDUSTRY

There is no arrangement by which enumeration of California fruit-bearing trees and plants can be made, except during the United States Census years, and therefore statistics in these lines are in part estimates and matters of judgment. The best available, and based upon reports by county assessors, are the figures published by the State Board of Equalization. The following figures are from the report of the State Department for 1914, which is made as of March 1 of that year:

NUMBERS OF FRUIT TREES AND ACREAGES OF GRAPES AND BERRIES

Fruit	Bearing	Non-Bearing	Total
Apple	2,044,916	753,313	2,780,229
Apricot	2,578,778	578,940	3,157,718
Cherry	628,699	323,419	952,118
Fig	441,621	61,619	503,240
Olive	638,184	221,923	860,107
Peach	10,199,568	1,297,075	11,496,643
Pear	1,751,326	349,910	2,101,236
Plum	1,017,881	122,308	1,140,189
Prune	8,078,830	1,227,234	9,306,064
Lemon	1,108,639	721,360	1,829,999
Orange	7,919,949	1,676,271	9,596,220
Pomelo	56,224	23,337	79,561
Almond	1,480,768	390,918	1,871,686
Walnut	689,208	424,501	1,113,709
Totals	38,634,591	8,154,128	46,788,719

Grapes (acres)	Bearing	Non-Bearing	Total
Table	58,799	12,227	71,026
Wine	164,300	30,560	194,860
Raisin	112,168	8,624	120,678
Totals	335,267	51,411	286,678

Small Fruits*		Acres	Value
Strawberries	4,585	......	$1,149,475
Blackberries	2,576	......	282,383
Raspberries and Loganberries	1,992	......	304,169
Other berries and currants	534	......	9,697

COMMERCIAL USES OF VARIOUS FRUITS

To show the very important fact that the leading California fruits of the deciduous class have several forms of commercial suitability and to suggest how California growers, merchants and preservers have not only guarded but have also extended the lines of wealth-winning by discriminating intelligence and enterprise in production, preservation and transportation, the following table is compiled, chiefly from the data collected by Mr. Howard C. Rowley, editor of the *California Fruit News*, who is an acknowledged authority in such lines. The figures for fresh and dried fruits are for 1914; for canned fruits, 1913:

Kind of Fruit	Fresh Shipments (cars)	Canned Fruits (cases)	Dried Fruits (tons)
Apples[1]	....	31,535	4,000
Apricots	208	848,880	19,500
Cherries	166[2]	162,665	....
Grapes	8,773	41,665	90,000[3]
Peaches	2,144	2,398,550	32,000
Pears	2,725	529,860	....
Plums	1,906	65,975	51,000[4]
Figs	....	.....	6,200
Lemons	2,954	.....	....
Oranges	45,594	.....	....
Various	49	9,405	2,500
Almonds	....	.....	2,250
Walnuts	....	.....	9,000[5]
Berries[6]	....	105,990	....
Totals	64,519	4,194,525	216,450

The figures for fresh fruit shipments include only shipments beyond State lines by rail, taking account neither of local marketing nor movement by sea. The figures for canned and dried fruits are intended to represent the total production.

A GENERAL REMARK

On the whole it is true that the immense fruit products of California are being easily disposed of at fairly remunerative rates, and the business is in good heart and enjoys a good outlook. There is, of course, fluctuation from year to year in the values of different fruits and in the market conditions which they meet at distant points. Such "off years" strike the fruits somewhat irregularly and are discouraging first to one special grower and then to another, because our localities are largely given to specializing, according to favoring culture conditions or otherwise. Still, we find that our fruit growing districts have the busiest towns, the handsomest rural improvements, the largest assessment rolls, and are most attractive to homeseekers. While these things are true our fruit industries must be counted in prosperous condition, although the greatest special anticipations are not always realized.

THE LEADING QUESTION ANSWERED

Briefly, in conclusion, the question set in the title of this article may be answered in this way: California leads the world in fruits because the State is naturally endowed with suitability of soil and climate for the production of so many which are acceptable in commerce; because the California people have invested capital and put forth effort to grow and preserve these many fruits to the limits of commercial demand, then by organization and by co-operative effort, have passed beyond all previously existing limits by developing new demand wherever on earth such extension was found to be possible. Opportunity for continuance of this effort remains open. The civilized nations are but scantily supplied with fruit-foods. It is California's function to teach them, by example, to produce for themselves to the limit of their natural suitabilities and to supply fruit-foods from her breadth of adaptation and abundance wherever local limits of production may be reached. Thus it is California's duty to lead and her opportunity to supply.

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*The figures on berries are from the United States census of 1910, none more recent being available.

[1] Apples not included U. S. D. A. figures California apple crop 1,300,000 barrels.

[2] Some years 250 cars.

[3] Raisins.

[4] Prunes.

[5] Some years 12,500 tons.

[6] No data for shipping or drying. Acreage by census of 1910, 9,687; value of product, $1,789,214.

What California is Doing For the World in Raisins

By James Madison

Vice-President and Manager California Associated Raisin Company

CALIFORNIA is a state of superlatives. Whatever it earnestly attempts, it leads in. One of these superlatives is California raisins. The raisin is one of the best and oldest of all known fruits. It is mentioned in the Bible, first in the book of Numbers, and later in the book of Samuel, thirty-five hundred years before the birth of Christ, and one has only to read the references to it to learn that in these early days of human history it was regarded as wholesome, nourishing and strengthening.

During all the intervening centuries it has retained its hold upon humanity as an article of diet. In the darkness of the Middle Ages from the fourteenth to the sixteenth centuries, it was regarded as an article of high commercial importance, and ranked as one of the leading articles of business exchange.

We have no positive knowledge of the date when the raisin first made its way into Western Europe, but we do know that thousands of years ago it was grown extensively in the countries of the Orient, and was carried by Oriental invaders into Western Europe, finally resting in Spain, which afterward became the greatest raisin producing country in the world.

THE RAISIN GRAPE COMES TO CALIFORNIA

From Europe the vine found its way to California, where it made its first appearance in 1851, having been introduced by Colonel Agostin Haraszthy of San Diego from some muscatel vines and seeds of Malaga raisins. In March of the following year he imported the Muscat of Alexandria from Malaga, Spain. Ten years later during a visit to that country in September, 1861, he selected cuttings of the Gordo Blanco, which afterwards were grown in his vineyards in San Diego. Consequently he was the first man to introduce the raisin vine in California. Another importation of the Muscat of Alexandria was made and planted in 1855 near San Jose by Mr. A. Delmas. Mr. G. G. Briggs of Davisville also imported Muscatel grapes from Spain.

The first public exhibition of raisins made from Muscat of Alexandria grapes was by Dr. J. Strenzel of Alhambra Valley, Contra Costa County, at the California State Fair of 1863. He also showed dried grapes of other varieties to demonstrate the character of a true raisin.

In 1873 Judge J. W. North, founder of the Riverside colony, first planted Muscat of Alexandria grape vines, but it was three years later before the grape growing in that district became general.

In El Cajon Valley Mr. R. G. Clark planted raisin vines in 1873, but the most of the vineyards in that excellent district were planted in 1884 to 1886. In 1875 McPherson Brothers, at one time the largest growers and packers in the State, planted raisin grapes in Orange County.

Soon after San Bernardino and Los Angeles counties went into the raisin vineyard business, but the ravages of the Anaheim Disease during the year 1884 to 1889 destroyed thousands of acres, and led almost to the extinction of the raisin vineyards in the district, which is now so famous for its citrus fruit.

THE BEGINNING IN FRESNO

In 1872 Mr. Eisen, while experimenting with vines, planted some raisin grapes in Fresno County, and in the third year he sold the raisins readily to a number of San Francisco people. Later a number of gentlemen in that city bought land and planted some raisins. So in 1880 the number of vineyards in Fresno County had reached quite respectable proportions.

A Fresno lady, Miss Hatch, has been credited with being the first individual who dried and packed raisins in the United States. The above records show that there is some doubt as to whether that really was the case, but there is no question that she was the pioneer in that line in Fresno County.

In 1876 Mr. W. S. Chapman imported some of the best obtainable Muscat vines from Spain for the Central California colony in Fresno County, but they were not found to be any different from those already growing here. The name of the party who first introduced raisins in California has not, and probably never will be, satisfactorily proven, but what is of chief interest to us is the fact that California has taken rank as the greatest raisin-producing country in the world.

The first considerable raisin vineyards of the State were those of Mr. G. G. Briggs at Davisville, Yolo County, and Mr. R. B. Blowers of Woodland, Yolo County, the former having planted principally Muscats, and the latter Muscatel Gordo Blanco. After years of experimenting, several of the counties in the State ceased to produce raisins, while others are doing so on a limited scale.

The crop of 1913 by counties is estimated as follows:

	Pounds
Fresno County	94,000,000
Tulare County	25,000,000
Kings County	20,000,000
Sutter County	4,000,000
San Bernardino County	3,600,000
San Diego County	3,200,000
Madera County	2,400,000
Yolo County	2,000,000
Kern County	1,100,000

It is not definitely known when raisins were first shipped in large commercial quantities, but in 1875 New York recorded that up to November 1st, 6,000 twenty-two-pound boxes of California raisins had been received. In 1888 Fresno County appears to have shipped its first considerable quantity. In 1887 market reports stated that "Fresno raisins of excellent quality are now on the market, especially from the Forsyth and Butler vineyards." That was in the days antecedent to the coming of the packers. The farmers at that time did their own packing.

The varieties of raisin grapes are few in number. The White Muscat of Alexandria, and the Muscatel Gordo Blanco fill first places; Malagas and Faherzagos are used to a small extent. The seedless varieties are the Sultana, which is grown extensively in Smyrna, in Asia Minor, and which was first brought by Colonel Haraszthy to California in 1861, and the Thompson Seedless, so named by the Sutter County Horticultural Society after Mr. W. Thompson, who procured the cuttings from Elwanger & Barry of Rochester, N. Y. For years a halo of mystery as to its origin hung over this splendid vine, but the pomological experts in Washington claim it to be the Sultanina Blanco, originally a native of China, and known to have flourished there two thousand years ago. Mr. Blowers of Yolo County also introduced a pink variety of the same grape on his ranch in Fresno County, which was also known as the Sultanina Rosea.

In the earlier period of raisin history in California, San Bernardino, which then included what is now Riverside County, produced the largest quantity of raisins. In the first six years the progress of raisin production was slow, but later the growth of the industry was phenomenal. In 1879 the crop first exceeded 1,000,000 pounds. In 1885 it had grown to 9,000,000 pounds and in 1886 to 14,000,000 pounds, and it continued to increase yearly until it has now reached the enormous total of 180,000,000 pounds.

FOREIGN TRADE IN RAISINS

It is interesting to note how the importations of raisins have decreased with the increase of our home crop. In 1873 we produced about 100,000,000 pounds, and imported over 35,000,000 pounds. In 1884 we imported nearly 54,000,000 pounds. Fifteen years later our importation had dropped down to a little over 6,000,000 pounds. Our export is correspondingly increased. In 1898 we exported 3,000,000 pounds, and in 1910 over 8,000,00 pounds.

Canada is our best foreign customer for raisins; New Zealand comes next, followed by Mexico and Japan.

Great Britain is the most extensive consumer of raisins in the world, but buys very few from us because of the close proximity of Spain, and the lower prices at which they can buy the Spanish product.

GROWERS' EFFORTS AT MARKETING

Many plans have from time to time been tried to market the raisin product at a living price to the producer. One reasonably successful plan was under the leadership of Mr. M. Theo. Kearney about 1895. Shortly after the falling to pieces of his organization, raisins were known to be sold as low as three-quarters of a cent per pound, cheaper than potatoes, and at that time a great many acres of vines were pulled up and the ground planted to other uses.

Another attempt was made in 1905 to organize the growers, but owing to a prejudice among them against co-operation only 38,000 acres signed up, and therefore in May, 1906, it was again dissolved.

In the spring of 1913 the California Associated Raisin Company was formed more on commercial lines. The raisin growers have paid into the corporation $1,000,000 for the purpose of financing and handling their crops, and the Associated Raisin Company has contracts with more than 6,000 growers, more than 90 per cent of the output of the State. Absolute necessity compelled the growers for their own protection to form this association, as every raisin grower who had no other means would have gone bankrupt or gone out of the raisin business if something had not been done. A product that under the management of the Associated Raisin Company will bring to the State from $8,000,000 to $10,000,000 annually should be taken care of, whereas formerly it would only bring half that sum, and all of this can be done without making raisins cost the consumer one penny more, and give the growers a price that will pay interest on a reasonable valuation of his vineyard and compensate him for his risk and labor.

PRODUCTION OF SEEDED RAISINS

A great change in the raisin industry took place in the late '90s. In 1896 the seeding of raisins was taken up in a commercial way. It has been known for twenty years prior to that time that the seed could be removed from the raisin by machinery, but it had never been put into any practical use. At that time Colonel Forsyth of Fresno began making commercial use of machinery to remove the seed from raisins, and some 600 or 700 tons were placed on the market. That has gradually increased annually, until in the year 1912 over 40,000 tons were sold in that condition, and from the last season's crop it will practically be about the same amount. The raisin industry in California has immense possibilities, especially for the counties suitable for that business.

Great Britain and modern Europe use about five pounds per capita. The United States, with perhaps 100,000,000 people, consumes less than one and a half pounds per capita. With a consumption brought up in this country to equal Great Britain you can easily see the possibility for the California vineyardist and the acreage that could be planted to vines.

FOOD VALUE OF THE RAISIN

The value of the raisin as an article of diet can not be too strongly impressed upon the people. There is no other food which contains the same concentrated strength and nourishment.

One high authority says, "The food value of the raisin is greater than that of any other fruit in popular consumption." Its superior nutritive quality is due to the large amount of sugar, gluten, mineral salts, and fruit acids, together with a lesser quantity of water than usual in fruits. Grape sugar is the chief nutritive constituent. The particular advantage which grape sugar possesses over all other types of sugar is the ease of its assimilation.

Probably one of the most important bulletins ever issued by the Department of Agriculture, Bulletin 142, gives the comparative food value of raisins against other foods, as follows:

One pound of raisins represents a food value equal to each of the following:

Six pounds of apples; five pounds of bananas; four and three-quarters pounds of potatoes; one pound of bread; four pounds of milk; four and three-quarters pounds of fish (edible portion); two pounds of eggs; one and one-third pounds of beef.

An important medicinal value of raisins is their laxative effect.

An eminent medical authority of the Royal College of Surgeons of London, Dr. Josiah Oldfield, states: "I put raisins as the first of all fruits that I know; they are far superior to grapes, because the sugar has thoroughly matured and ripened, and transformed ready for digestion."

Another eminent English authority, Sir William Gull, in giving his evidence before the royal commission of the House of Lords, stated, "After a hard day's work I get more strength from eating a few raisins than I would from drinking a glass of wine."

Mr. Elbert Hubbard has written, "The extreme prices of meat and bread stuffs are giving California raisins their innings. The raisin is the finest fruit that I know of. It can not be adulterated. Your children will find raisins a natural, heaven-prepared food."

An eminent American physician, Dr. George Still, has this to say, "Raisins never caused appendicitis, but the lack of them may."

RAISINS IN STATE DEVELOPMENT

It is a pleasure to know the interest that the whole State—yes, the whole United States—took in Raisin Day. That is the beginning of an advertising campaign that the California Associated Raisin Company contemplates beginning for the purpose of increasing consumption of this, our beautiful product, so that we may find a more ready market for all we now produce.

From $8,000,000 to $10,000,000 per annum is brought into the State of California, real new money—money brought out of the earth by the raisin grower. That is the class of money that increases wealth. Most of the business transactions are matters of exchange of one to the other and do not particularly increase the wealth of a community, but money like this raisin money is divided up and eventually every person within the State gets an indirect benefit from it. In the packing season we employ over 4,600 people and our pay roll is over $50,000 per week.

The vineyards of California have been from an advertising standpoint, one of the strongest and most inducing and convincing evidences that has ever been sent out to the world of our beautiful climate and of the productiveness of the soil in the state of California, and that is an asset of incalculable value.

The acreage planted in raisin grapes in California in 1914 is estimated at 120,000 acres. The annual crop ranges from 180,000,000 to 200,000,000 pounds.

Alfalfa in California

By Gerald D. Kennedy

Field Expert of the California Development Board

The word alfalfa is derived from the Arabic meaning "good fodder," and in this State it has proven worthy of the name. It was first planted in the inland valleys, but at the present time it is a staple crop from the Mexican border to the Oregon line. As a rule, situations open to direct coast influences are not adapted to the growing of this crop.

CLIMATE AND SOIL

A long, warm, growing season is desirable, the longer and warmer the summer the larger the crop, other conditions being equal. The only effect cold has on the established plant is to stop the growth so it lies dormant during the winter months. Frost is apt, however, to kill the young plant as it sprouts through the ground; it is not free from danger until the third leaf has appeared.

The ideal soil is a well drained loam with a depth of ten or twelve feet. However, the crop thrives on a great variety of soils, from a light sandy loam to a heavy adobe. It is also grown successfully on soil only four feet in depth. Alfalfa should never be planted in soil where the water level is within four feet of the surface or where there is too much acidity in the soil which sometimes happens when wheat or corn has been grown for a number of years on land not naturally well drained. It does not follow that all worn-out grain land is acid, as many of our most successful plantings have been made on such land. A simple test for acidity is to make a cut in the soil and insert a piece of blue litmus paper. After remaining in the ground for several hours the litmus paper should be examined; if pink in color, it is proof of acidity. The remedy for acidity is the application of lime, 500 to 1,000 pounds is usually sufficient for an acre. Our California soils usually contain enough plant food; if they are lacking in anything it is apt to be humus, which may be replenished by plowing under some cover crop. For quick results rye is very effective. Alfalfa gathers its nitrogen by means of bacteria, which are found in small nodules on the roots. These bacteria must be present if the alfalfa is to flourish; if they are not found in the soil they must be furnished artificially. Either the seed or the soil may be inoculated. Preparations are sold for the treatment of the seed. Soaking the seed in solution made from the soil of a healthy and mature alfalfa field is an economical method of inoculation. Soil from an old stand of alfalfa is sometimes spread to the extent of about 400 pounds to the acre before planting, or manure from alfalfa fed animals may be used. All of these methods have given satisfactory results. Alfalfa will stand a little more alkali than the average plant; this is especially true after the field has a start.

WATER REQUIREMENTS

Irrigation is necessary to obtain the maximum yield in this State, though in many places it flourishes without the aid of it. Hence the first thing to develop on a prospective alfalfa field is the water. On unirrigated fields the gophers and squirrels are a menace and it is sometimes necessary to apply water for the sole purpose of drowning them out. The only time that it is unadvisable to use water is when the alfalfa is being grown for seed purposes, because a thin stand is desirable and the seed is hardier.

Water for irrigation may be obtained in several ways, by acquiring a ditch right in some irrigation system, sinking a well and pumping, or using the water from some near-by stream. Water from a ditch costs from $1 per acre per year up, depending on the location. Under ordinary conditions the cost of pumping water is about $4 per acre per year. If a pumping plant is the source of supply it is always best to use a reservoir, as it lessens the cost of handling the water. The cost of installing a pumping plant capable of irrigating twenty acres would be approximately as follows:

Sinking 200-foot well	$300.00
Installing pit	50.00
Motor and pump	300.00
Reservoir 50x50x4	55.50
Total	$705.50

If a gasoline engine is to be used the cost would be about $100 additional.

It is impossible to state the amount of water that is necessary, as it varies under different conditions. Light sandy soils require more water than heavier soils, as they do not hold the moisture so well.

In order to facilitate irrigation the land is usually checked. It has been found by experience that frequent shallow irrigations are more desirable than heavier ones at greater intervals. The most practical way of applying the water is after each cutting, as at that time the water flows quickly over the ground. The water should never be allowed to stand on the field in warm weather for more than a day, as it is apt to kill the plant. Young alfalfa should never be watered until it shows signs of distress, the idea being to make the roots go down and seek moisture. Where only a small quantity of water is used, it is often applied by means of movable slip-joint pipe.

PREPARATION OF THE LAND

Land that is to be planted to alfalfa should be broken a year ahead of time if possible. Deep plowing is the first essential in preparation. After the land has been worked up, it is ready to be checked and leveled. These preparations are done at the same time, the checks are made by throwing up small levees, rarely more than twelve inches high as the mowers and rakes have to be driven over them in harvesting the crop.

There are various methods of checking; in ground with an even slope, strip checks may be used, 25x300 feet is a satisfactory sized check. In fairly level land the square check is advisable; 80 x 80 feet or 100 x 100 feet are good sized checks. Where the ground is rough, contour checks are often used. The idea in checking is to get the land in such shape that water can be applied economically and quickly; this fact should never be lost sight of. Ditches should always be put on the highest ground and if the fall is enough to cause washing, ''drops'' should be put in. Head gates to control and facilitate the handling of the water may be made out of wood, concrete and galvanized iron. The cost per acre for concrete gates is about $5 and for wooden gates $2. The leveling and checking is done with a four-horse scraper and the cost varies from $5 to $35 an acre, figuring the man and scraper at $6 per day. Light sandy soils are more apt to be unlevel than the heavier lands, therefore there is more dirt to be moved. ''Hog wallow'' lands are very unlevel, but those where the mounds are close together are easier to level than are those where they are far apart. Before seeding, water should be turned into the checks to see that they flood properly; a good stand of alfalfa can not be obtained unless this work is well done.

SEEDING

Spring seeding is preferable in most parts of the State, as there is less danger of frost at that time. Before planting the ground should be thoroughly worked and the under surface packed, as alfalfa does best in a firm seed bed. The seed may be either drilled or broadcasted. Drilling is preferable as the seed is scattered more evenly. Twelve to fifteen pounds is generally sufficient seed to sow to the acre; the price varies from 15 cents to 20 cents a pound. The cost of seeding would then be from $2 to $3.50 an acre. The actual cost of sowing the seed is negligible. It is never advisable to sow a nurse crop, because it uses moisture and food that is needed for the young alfalfa plant.

VARIETIES

The alfalfa that is ordinarily grown in this State is the Chilean, and it is the variety that has proven most successful. Turkestan is a hardier variety and withstands the cold and drought better, but the quality of hay is not so good. Arabian is a short-lived variety that is used to advantage for rotation purposes where the stand has to be plowed out in a few years. Peruvian alfalfa is still in the experimental stage in this State. The advantages claimed for this variety are a longer growing season and therefore a greater tonnage. Before planting any seed it is advisable to send a sample to the University of California to have it tested for weeds and germination. This does not cost anything and often may save a great deal of trouble and expense.

CARE OF ALFALFA

When the young alfalfa is up about six inches it should be clipped to strengthen the plant and to delay the weed growth. It should never be pastured the first year or when the ground is damp, as it is easily tramped out, especially by hogs. By pasturing too heavily it is apt to be injured, as the animals will eat too close to the crown. Disking the field in the winter is often of great benefit and it is also advisable to apply all of the manure at hand. Superphosphates can be used to good advantage on light soils. The cost is about $20 a ton and that is sufficient for six or seven acres. The friability of heavy soils may be improved by applying 300 to 400 pounds of gypsum to the acre; the cost is about $10 a ton. The common practice in California is to apply lime instead of gypsum.

HARVESTING

It is very important to cut alfalfa at the right time. It has been found that the most nutriment is in the hay when it first starts to blossom; at this time the young shoots are also leaving the crown. The haying season starts in April and where conditions are favorable a crop is cut every four weeks until the frost comes. One man and a two-horse mower can cut eight acres a day.

The hay is allowed to lie in the swath until the stems can be bent without exuding moisture which usually takes a day, sometimes less and sometimes more, depending on the weather. The hay is then thrown up into the windrows by means of a two-horse rake. A rake can take care of two mowers; from the windrow it is forked up into small shocks. One man can shock about eight acres a day. The hay should be removed from the field as soon as possible. The sooner it is hauled the less danger of losing the leaves, which contain most of the nutriment, and the sooner the water is applied the better for the next crop. Cost of harvesting a ton, figuring the crop on a two-ton basis:

Mowing (8 acres per day)	$0.25	per ton
Raking (16 " ")	.12½	"
Shocking (8 " ")	.12½	"
Hauling and stacking	1.00	"
	$1.50	"

If the crop is lighter than two tons, the cost of handling would be about the same; therefore it would increase the cost per ton.

YIELD

The first year only two or three cuttings are obtained and after that the yield varies from four to ten tons per acre per year. Under favorable conditions the grower can expect an average of six or seven tons to the acre. The first cutting is usually weedy and often used for silage on that account, as it would not command the same price for hay as the later cuttings.

PRICE

The price of unbaled hay varies from $3 to $10 a ton, depending on the season. In the stack 512 cubic feet is considered a ton. For shipping purposes the hay must be baled. Baling costs from $1.75 to $2.00. The price of baled hay varies from $6 to $13 a ton. Small bales weighing from sixty to eighty pounds are preferred. A man can secure better prices for his hay by feeding it to dairy cows and hogs. The average dairyman estimates that his cows pay him $12 per ton for his hay only. This depends on the cow, though naturally alfalfa and dairying go hand in hand.

PESTS AND DISEASES

Dodder, a yellow clinging plant, is the worst pest of alfalfa in the State. With the proper care, there is no danger from it, for it usually comes from using foul seed and for this reason a careful test of the seed should be made before planting. Small patches of it in a field can be destroyed by heaping straw on the affected piece and burning it. Gophers and squirrels are serious pests in unirrigated fields; where water is obtainable they are easily kept in check. In some sections the stand is fouled with Johnson and Bermuda grass. Such fields should be carefully pastured or the hay cut early in order to keep them in check. To eradicate them entirely would necessitate the plowing up of the alfalfa.

RENTING AND SELLING

It is a common practice to rent alfalfa fields, particularly for dairy purposes. The rental depends on the stand of alfalfa. Sometimes it is rented on shares, but usually for cash, to be paid in several installments through the year. The price is from $10 to $25 per acre a year, averaging about $15.

Alfalfa land is sold at all prices up to $300 per acre. A great deal of it is held in the unimproved condition at $150 per acre, and unless the price is influenced by proximity to towns, this is all one should pay for such land. Land already planted to alfalfa can be bought for $150 to $400 an acre.

ALFALFA SEED PRODUCTION

This is carried on extensively in Modoc, Lassen and other mountain counties and in the Sacramento and San Joaquin valleys. Land for seed production should not be wet and yet it should be moist enough to mature the crop without irrigation. Sandy lands are not adapted to growing seed crops. The stand of alfalfa should be thin so that the sunshine and air can reach to the crown of the plant and the seed be produced the entire length of the stalk. In the mountains no hay is cut when seed is produced. In the big valleys the third crop is allowed to go to seed. When a crop of seed is produced one or more crops of hay are sacrificed. The straw has some feeding value and the stockmen will pay $4 a ton for it, when the hay is worth $8 per ton. The yield of seed averages 500 pounds per acre. Some seasons the seed does not seem to set well, so each year the grower watches his crop carefully and if the seed does not set it is cut for hay. The price received for the seed averages 13 cents per pound. In harvesting, the crop must be handled with care to prevent shaking the seed out. A mowing machine that bunches is desirable; or else men follow the mower and set the seed-loaded alfalfa to one side in small bunches, where it is carefully loaded on wagons and hauled to the thresher. Seed production has proven to be very profitable in the sections adapted to it.

LIFE OF ALFALFA

The life of an alfalfa field varies greatly according to the care and soil conditions. It is safe to say that the life of an alfalfa field in this State should be from ten to fifteen years if it receives the proper care. Alfalfa, unlike other crops, enriches the soil instead of depleting it. It has the characteristic property of legumes of being able to extract nitrogen from the atmosphere and put it into the soil. Nitrogen is the most expensive of soil fertilizers and the one usually most needed. This property of alfalfa makes it of infinite value as a soil fertilizer, hence its popularity for rejuvenating the soil. Its deep rooting capacity permits it to reach to great depths for its plant food. Its extensive root system creates and puts new life in the soil and when the alfalfa field is plowed up these roots decay and the fertilizer is distributed through the soil. Land that has been heavily cropped one year after another, when put into alfalfa takes on new life. When grown for a few years among orchard trees and plowed under, it is a valuable fertilizer, not only adding nitrogen to the soil but also improving the physical condition. Doctor Hilgard claims that the crop is worth $8 a ton as a fertilizer to plow under.

ALFALFA AS A FEED

Digestible nutriments contained in 100 pounds of green alfalfa:

Dry matter	28.2 pounds
Protein	3.6 ''
Carbo-hydrates	12.1 ''
Fat	.4 ''

Digestible nutriments contained in 100 pounds of alfalfa hay:

Dry matter	93.2 pounds
Protein	11.1 ''
Carbo-hydrates	39.1 ''
Fat	1.0 ''

The above tables show the high nutritive value of alfalfa, either as a green food or as a hay. All animals like it and without doubt it is the best roughage we raise in this country. It must always be remembered that it is only a roughage and that to obtain the best results some concentrated carbonaceous feed, such as corn or barley, must be fed in conjunction.

There is danger of bloating either cattle or sheep, when pastured on alfalfa. They should be carefully watched at first and only allowed to graze a short time until they get accustomed to it. They should never be turned in to graze when the plant is damp.

Most of the alfalfa in this State is used for dairy purposes. A good stand yielding about seven tons will furnish enough feed for one cow. It is figured that a cow will eat half a ton a month. Hogs are usually run in connection with a dairy; the skim milk combined with some grain and alfalfa makes an ideal ration for hogs.

It is too laxative to be fed in large quantities to horses doing road work, but for work horses and brood mares it is of great value. It is an excellent feed for any kind of growing stock because of its high protein content, which forms the bone and muscle. Bees make excellent honey from it and it is unsurpassed as a green feed for poultry. Sometimes it is ground into meal to make it more palatable for some kinds of stock, such as hogs. Alfalfa meal combined with beet molasses makes a very desirable concentrate. Some alfalfa is used for silage purposes, but the most advantageous way is to feed alfalfa hay and supplement it with corn silage.

At the present time there are about 600,000 acres planted to alfalfa in this State, yielding close to 2,100,000 tons of hay, or an average of three and one-half tons to the acre.

Opportunities in California Dairy Farming

By Wm. H. Saylor

Formerly Secretary California State Dairy Bureau; Publisher and Editor ''Pacific Dairy Review''

IT IS generally accepted that in establishing one's self in some line of business, capital is an essential. Failure in farming has particularly been credited to the fact that it is too often undertaken with a lack of sufficient capital. I want to point out that there is at least one line of industry and one part of the country where success may come, and has come in abundance where the only capital consists of strong arms, intelligence and determination and California furnishes the theater where it can be done. In substantiation of this claim, I want to point to at least five thousand examples of its proof among the present dairymen in the State, all of whom it may be said engaged in the business at some stage with the ''capital stock'' above enumerated.

Let us take a typical case—it will probably be some young man just past his majority, who arrived from Portugal, from Switzerland, or possibly Denmark or Germany. This young fellow loses no time on his arrival in a new country, everything in which is strange to him except work; that he has a thorough acquaintance with and he finds it in abundance in the demand for workers on the dairy farms of California; in fact, he was sure of a job before he left the old country, and at any rate he is here but a few days when he is out in the open country—in California's sunshine—extracting the liquid sunshine from the California cows.

At the end of his first month he is handed his pay—forty dollars, and perhaps forty-five. His eyes are opened by the shining ''twenties.'' The energy of his arms and the enthusiasm of his willing mind are being converted into cash capital. A year rolls by and he has five hundred dollars; he has it in some bank dominated by the people of his nationality where it is drawing interest with the exception of a small proportion that goes for the purchase of clothes and the few pleasures he craves aside from the satisfaction that he finds in the fact of making financial progress. He puts in a second year and possibly a third in the same way, and likely on the same dairy farm. Then he takes stock and finds himself possessed of a fortune amounting to a thousand or fifteen hundred dollars. We will put it at three years and credit him with the latter sum.

During his employment as a milker on a dairy farm he has taken one of his brother milkers into his confidence and plans for his future. His friend, too, is likely possessed of a similar ''pile'' in the bank. The result of this mutual planning is a partnership backed by sufficient capital, especially by exercising their borrowing capacity—and this class of industrious young men generally have credit to buy cows and equipment to conduct a leased dairy farm on a fifty, seventy-five or hundred cow basis. Perhaps they rent from their former employer, who, seeking retirement, is pleased to turn the place over to them, for he knows them and the ''stuff'' they are made of. Maybe it is some disgruntled American farmer or dairyman who wants to get away from the ''drudgery and bother'' of running a dairy, in which case, as likely as not, the new partnership picks up a ''snap.''

Meanwhile the probabilities are that romance has been at work and our erstwhile young foreigner, combining good business with romance, has sent word to his old sweetheart at home to come to California and join fortunes with him, and in short she is installed as the life partner of one of the members of the firm and chief of the household department of the dairy establishment.

The fat bimonthly checks come from the creamery or city milk dealer. The ''veal wagon'' makes its regular visits, leaving liberal checks, while the boys go on accumulating pork; at the same time, something else is going on; the heifer calves are being raised and in a few years the original herd has outgrown the farm. Something must be done; the partners again confer and finally decide to break the enterprise into two units; one acquires a lease on another piece of property, the checks continue to come in, the bank accounts accumulate, as does also each herd. The next step has arrived and all of a sudden the local community is surprised that the Portuguese, Swiss or Scandinavian immigrant, or whatever the nationality may be, of only a few years ago, has purchased a farm and completed the transition from a poor and modest but willing wage earner, to an employer of labor and a person of business standing in the community.

I take this course of presenting dairy opportunities in California, not out of mere fancy, but because it corresponds with facts. Go into any dairy community in the State and you find it exemplified—in fact, the dairy industry of California rests on just this line of experience. It rankles an American somewhat to admit the success of this thrifty foreign-born element. But it is true. The American youth comes to California looking for the easy, cuff-and-collar job; in too many instances he fails to land it, and while he drifts to lower strata of labor, he does it with disgust in his heart, ambition dies out, while the young foreigner finds in the humble work on a dairy farm his opportunity.

FUNDAMENTAL FACTORS OF SUCCESS

And how do we account for this success and wherein is the opportunity? I have only space in which to present a few pertinent facts. I shall leave out of discussion that portion of California known as the native pasture dairy sections, as they have already reached a fair degree of development, and confine myself to the irrigated dairy sections of the State in which alfalfa grows to perfection. Land under either surface irrigation or moistened by underflow through the soil yields from five to eight tons of hay to the acre, while ten tons is not an exceptional yield under ideal conditions.

The scientists will tell us that a ton of alfalfa hay contains 210 pounds of digestible carbohydrates, what might be termed the refined products out of which milk and meat are made in the animal body. At five tons to the acre it means approximately 1,000 pounds of digestible protein and 4,000 pounds digestible carbohydrates to the acre. These same scientists tell us that a fairly good dairy cow can do good work with three pounds of the protein and fifteen pounds of the carbohydrates a day, and hence the accepted standard of one cow to the acre of a fair alfalfa yield is a liberal one. There are dairymen who keep two to the acre; there are others who use two acres or more to one cow and fail at that. Good management and a thorough understanding of soils and cropping account for the difference.

And what can the California cow do with this alfalfa? A few figures will show it. In Tulare County they have a body of dairymen who have banded themselves together to systematically ''test'' their cows through the medium of an official tester in order that each cow in the herds may be made to stand on her individual showing for butterfat production. Thirteen herds have completed a year's work with an average production of 272.5 pounds, fed exclusively on alfalfa.

The statistician of Stanislaus County found that it produced 7,541,900 pounds of butter in 1913 from 30,228 cows in the county, making an average yield of 248 pounds per cow besides supplying local needs in the way of milk and cream.

Up in the Eel River Valley, Humboldt County, where clovers take the place of alfalfa, eight herds entered in the Ferndale Cow Testing Association, representing 609 cows, averaged 291 pounds of butterfat in a year.

Taking yields of individual cows, we have some striking records to show what a good cow can do on an exclusive alfalfa ration. The best producing cow in the Tulare Testing Association referred to, a Jersey, made 437 pounds of butterfat in a year. In the Ferndale Association, one herd developed cows with yearly yields of butterfat amounting to 544, 464, 456 and 458 pounds. A cow in the writer's herd made 444 pounds of fat in a year. In fact, reports of cows yielding over 400 pounds of butterfat in a year on exclusive alfalfa feeding are numerous, and nothing can better proclaim California's claim as the ideal home of the dairy cow and the way in which she compensates for them in profits.

GROWTH OF THE CALIFORNIA DAIRY INDUSTRY

The result is shown in the rapidity with which the State has forged ahead in the dairy business, a business that represents $40,000,000 annual gross income to the industry. From a butter production of 28,783,859 pounds for the year 1900, it has grown to 59,286,460 pounds for the year ending October 1, 1914; butter, by the way, being the principal avenue through which the product of the cows of California is disposed of. The gain during the years shown above represents in the main the development of the dairy industry in the irrigated portions of the State.

Coincidentally with the increase in importance and extent of the dairy industry in California has been the progress in better methods, in a better and more profitable class of dairy cows and in sanitary and well-equipped dairy plants. She has models of the last mentioned and some of her breeding herds are world famous. How much our climatic and feed conditions contribute to the evolution of a better race of dairy cattle Californians are too modest to make claims. The fact remains, however, that the breeding of registered animals of the purely dairy breeds of cattle is one of the profitable and attractive features of the business. The local demand for breeding stock has been strong, while an export demand is ready to take our breeding stock as soon as we get in a position to supply it.

With the splendid success that dairymen have made in the past in California and the rapid development that the industry has undergone, the question naturally presents itself as to the permanency of this prosperous condition and the prospects for continued profitable returns from the dairy herds of the State. The alarm about overproduction is always present with the pessimist. I heard it twenty years ago when California produced less than one-third of the butter she produces at the present time. It prevailed at a time when the dairy industry was confined to less than a dozen counties along the immediate coast, whose produce did not only supply the urban population of the State, but much of which was shipped into some of the interior counties, some of which are now producing as much butter as any two counties in the older dairy territory referred to.

California is not developing along single industrial lines. At one time it appeared as though this might be the case, and that she would become one vast combination orchard and vineyard, and decreased returns in these lines of agricultural activity have often been pointed to as examples of what may happen to the dairy business as a result of its rapid expansion. Each decade we have seen the dairy output of the State double, but each one has also seen the consuming industries other than those strictly agricultural, incident to our apparently inexhaustible supply of mineral oil, the utilization of our vast stores of still undeveloped electric power, the expansion of our domestic and overseas commerce, developing a non-agricultural population in California that has forced the prices of staple farm products upward instead of downward.

When we have supplied the demand in California for butter we can turn to cheese production. The State still imports two pounds of cheese to every one that we produce, and fifty cans of condensed milk for every one of local production. When we have fully supplied these channels an Eastern demand eagerly awaits our supplies of dairy products. Vacant areas of land throughout the country are being occupied. The beef industry, which is so closely correlated to that of dairying, is no longer a matter of free ranges. The smaller farms must supply the meat for the people, and the attractive prices for beef are holding development of the dairy industry in check in the big states of the Middle East, and in consequence of which the price of dairy products is approaching prohibitive figures in the great consuming centers of the East. These offer great opportunities for California dairy products. And fortunately she is able to take care of this demand at its best, which is during the midwinter of the East, where severe weather makes dairying a matter of small profits in winter, while the California cow, living in the open winter and perpetual sunshine, gives as good an account of herself during the winter months as at any other. Indeed, California can have somewhat of a monopoly on fresh-made winter butter of high quality if her people see fit to develop it. It pays to raise oranges and other fruit to ship to the Eastern markets. A carload is worth from $200 to $800, and sometimes there is nothing left after paying handling and transportation charges. A carload of butter is valued at from $5,000 to $7,500, and the sale of it at a distant point is bound to leave some part of it for the producer.

Dairy Instruction at the University Farm

By Prof. H. E. Van Norman

Vice-Director and Dean of University Farm School at Davis, Cal., and President National Dairy Show

The rapidly increasing amount of land being brought under irrigation and the cultivation of alfalfa, make the development of the dairy industry of the state of California an economic necessity, to say nothing of the increasing market for dairy products, especially ice cream and market milk, as the population of the State grows.

The competition of products from outside the State, notably butter, from across the Pacific, makes it imperative that the quality of California's products shall be of the best. When the product is scarce the buyer is not critical, at least not as critical as when the market is generously supplied and he may choose the best.

The instruction facilities provided by the State at the University Farm at Davis are planned to assist the practical dairyman in more successfully overcoming the difficulties to be met with in ordinary practice, and to attain that excellence of product which commands the highest price in the face of competition. It should be borne in mind that only the best product can be shipped across the continent, or across the Pacific. Therefore, the near-by creamery or dairy, face to face with foreign competition, finds only the best quality to compete with. To make the highest quality requires an understanding of principles, and a control of conditions. It is to supply this knowledge, together with sufficient practice to make it clear, that the instructional work and equipment at the University Farm are planned.

This plant comprises a ranch of nearly 800 acres, part of which is devoted to investigational and educational work, with fruits and crops, while the remainder is producing feed for the herds and flocks.

The dairy herd includes excellent groups of the leading breeds, notably Holsteins, Jerseys, Guernseys, and a few Ayreshires; also some grades in feeding experiments. Excellent individuals are to be found: Pietertje Bloom, 66,816, has a record of 23,591.2 pounds of milk and 783.35 pounds of butterfat; Colantha Fourth's Lad Mercedes, a four-year old heifer, has a record of 17,126 pounds of milk and 611 pounds of butterfat. These are all Holsteins, while the young Jersey cow, Mermaiden's Fern, has produced 9,770.5 pounds of milk, and 528.2 pounds of butterfat; and Brown Bessie Gaylark has produced 500 pounds of butterfat, and has several weeks to go before completing the year.

A creamery building, equipped with the latest apparatus for the churning of butter, making ice cream and cheese, together with the testing of all kinds of butter products, is available for instruction and investigation. The cream or milk from some eighty ranches is regularly brought to this creamery, so that every day there is available material for student practice. When the students are not there the regular employes and instructors perform the work, thus the students receive instruction from men who are in daily practice in the actual handling of dairy products. During the present fiscal year something over $60,000 worth of butter, ice cream, cheese, milk, etc., has been sold.

DIVISIONS IN INSTRUCTION

The instructional work may be divided into three classes—that for the university farm school students, young men who are eighteen years of age or older, and who may not have completed a high school course or otherwise not fulfilled the requirements for admission to a college course in agriculture, yet are too old to go to high school for further preparation. To these men is offered three years of training in agriculture, with an opportunity to devote their attention chiefly, either to horticulture or livestock, or to dairy work.

In the second group are the students who, having completed two and one-half years in the regular courses of the College of the University of California, come up to the university farm for that training in agricultural subjects which requires for its most efficient practice the use of the creamery equipment, the herds and flocks, the poultry, the swine herds, the orchards, and the fields.

The third group are the short-course students who come for six weeks in the fall. These are divided into two groups—those who are preparing themselves to go into commercial creameries as helpers or foremen, and those who are going out on the ranches to handle the herds, produce milk for a creamery, cheese factory or the city milk plant, grow grain, stock or fruit.

The relatively large proportion of students of the farm school who have devoted much attention to the dairy subjects in the few years of the school's existence is evidence of the widespread interest in this line of farm business and educational work.

Correspondence courses dealing with dairy productions are also offered, and are being taken by a large number.

At stated periods the butter makers of the State are invited to send in samples of their product for examination by commercial judges with criticisms and suggestions for improvement by members of the staff of the dairy division.

Some forty-odd butter makers took part in these scoring contests during the past year. Those who completed the year participating in every contest received a certificate of merit for proficient work. Nearly half of those participating this year took part in one or more preceding years' contests.

The greatest need of the dairy industry in California is pure bred sires at the head of the herds, together with the use of the scales and the lead pencil, to the end that we may have more and better cows, and that more attention be paid to the handling of the product.

What California is Doing in Education

By Hon. Edward Hyatt

State Superintendent of Public Instruction

PEOPLE who think of moving to a new region are almost sure to inquire, "What kind of schools have they there?" before they go far toward acquiring a home. It is safe to reply to those who ask this question of California, "The best schools you ever saw in your life!" The answer will probably be correct, even though the inquirer comes from the rich state of New York or the classic environs of Boston.

The most striking characteristic of those schools, perhaps, lies in the provision and care for the children in the remote rural regions. No mountain top is to inaccessible to have its school, no plain too distant; no sagebrush desert too far removed. Wherever half a dozen children dwell, there you find a district school. And, mark this—this remote school, so far away, so small, so weak, has a standard schoolhouse, a standard teacher, a standard equipment, and a standard length of term. The chances are that the building will be neat, well-painted and comfortable, even if it harbors only a half dozen lonesome children. Certainly there will be eight or nine months of school in the year. The teacher will surely have the same education and the same certification as in the proudest city. The books, apparatus, and other educational appliances will be of the same character as in the populous centers. It is the idea of a generous state that one child is as good as another, no matter where he happens to dwell, and that it is our duty to guarantee the rudiments of an education to every child within our borders, even on the mountain top, the deep tangled wildwood, or afar on the lonesome plain.

GENEROSITY OF CALIFORNIANS

The expense of all this, mind you, does not fall upon the parents of the children nor upon the residents or property owners of the local district. It is provided by the general tax upon state and county. The rich cities, with their banks and warehouses, and teeming crowds, must contribute to the preparation of the remote rural children for citizenship and life.

In the towns, villages and well-settled fruit and farming regions, educational conditions are correspondingly easier. No people anywhere in the world are more freehearted and generous to all good things than those of California. Descended from the hospitable and openhanded Argonauts, their generosity still abides. Beautiful schoolhouses dot the landscape everywhere. High schools, normal schools and other higher institutions abound. The newer structures are palaces, veritable palaces of education, built by skilled architects, in classic designs, of permanent materials and fitted with lavish laboratories, workshops, classrooms, and everything else that can add to the opportunities for the training of youth. Truly it has been said that the college of yesterday is the high school of today. Nowhere is the change and advance in our mode of life more manifest than in our schools.

The city of Sacramento, less than a decade ago, built a magnificent $250,000 high school, intended to take care of the city's children for all time and it was bitterly opposed by many people as being unnecessary as preparing too far into the future. At once it filled up and overflowed. Other structures were added, clear around the block—already they have filled up and overflowed, and another new and splendid building is preparing, in another quarter of the town. And the end is not yet.

SCHOOL BUILDINGS FIRST

This experience in Sacramento is duplicated in many another city; Stockton, Marysville, Oroville, Red Bluff, Woodland, Berkeley, Richmond, Riverside, Santa Ana, Santa Monica, Monrovia, Oakland, Pomona, Redlands, San Diego, have all been notable for school improvements during the immediate past. A town of a thousand inhabitants thinks nothing of spending forty, sixty, a hundred thousand dollars for an educational plant. High schools are in every county. Splendid normal schools in different parts of the State prepare the teachers for the surrounding country. Business colleges are in all the larger cities and a large State industrial school is at Ione; another at Whittier. Many of the high schools are accredited and lead directly to the State University at Berkeley, which takes rank as one of the greatest institutions in the United States.

One of the striking original features of the California school system is its plan of furnishing text-books to the children. This is the only state in the Union that manufatcures its school books in a state printing office and distributes them free to the boys and girls in the schools. It may be imagined that there were many obstacles and difficulties in the way of this plan. The original enterprise was marked by most strenuous opposition, abuse, vituperation, from every quarter. It was started nearly thirty years ago and has had many ups and downs as time has elapsed. It was handicapped for a long time by poor books prepared by local people; by uneconomic methods of production; by political interferences of one kind and another. All these difficulties, however, have been met and disposed of as they came up, and at the present time the school-book enterprise is in admirable condition and is regarded as a successful and beneficial institution by the people of the State. They would not do without it.

The books are chosen from the best of those published in the world. The plates and rights are leased from the publishers for four-year periods. The books are printed and bound at the state printing office at state expense and they compare favorably in workmanship with those in the markets of the country. They are then distributed free to the children, upon requisition from teachers, principals and superintendents, showing the needs of the schools. This gives great relief to the parents and saves much trouble to the teachers, and makes a relatively small expense to the State. The cost of furnishing the 400,000 children with school books is less than $200,000 yearly.

AGRICULTURE AND EDUCATION

There is a great growing belief that the schools must become more closely allied to the industries by which the people live. Particularly in California schools must be open to the genius of agriculture. It is highly desirable to build up a spirit of sympathy for agriculture in the minds of all the people and to bring them into actual contact with the agricultural life. For many generations everything in education has tended away from the farm. The district school never does one thing in its course to prepare the boy or girl for living on his or her father's farm. It always heads him rather toward clerical or professional pursuits in the cities.

A movement has started in the prune orchards of the Santa Clara Valley that bears so directly on these educational questions that it is here illustrated to show what is being done to solve them. The idea is to enlist the interest and the labor of the children and the people of the villages and towns in the harvesting of our perishable fruit crops, paying them full market wages for their work, furnishing them safe and attractive camping places, facilitating their coming and going, and giving them a season of healthful, active, outdoor life.

THE SEASON OF HARVEST

This is a practical course of study in California agriculture that may well command the co-operation of the educational forces of the State. The school term may very well begin and close so that the children and their parents can take part in the chief industry of the neighborhood. The chief hardship of the fruit grower is the lack of labor for the gathering of his crop. This it is that brings unassimilable foreigners upon us—Japanese, Hindoos, Chinese. This it is that is forcing much of our richest lands into the hands of aliens. The safety of our nation lies in having our land owned by our own people who can earn their living from the soil. It is a splendid thing to see the schools closed and the villages depopulated during the harvest season; to see the mothers and the children living outdoors for a time and helping to pick the hops, gather the grapes, dry the peaches, take care of the prunes, apricots, tomatoes, and all that. It makes stronger, happier, more wholesome people. Everybody may well join in it. There is no loss of dignity in it. It advances the interests of California's greatest industry, the industry by which we must live for centuries into the future, with the world for a rival. It is truly educational, in the best and highest sense.

The school garden is another idea along this line that is spreading all over the State, and it is a most delightful and practical method of approach. Not all teachers have the knowledge and sympathy that makes for the highest success, but nearly all come of ancestry that lived by the soil; and if their minds are open, their hearts willing, the old interests will come back, and there are not many children who fail to respond.

The following tables will serve to give some idea of the wonderful growth of the elementary and high schools of California during the past few years.

TABLES SHOWING GROWTH OF EDUCATIONAL INSTITUTIONS IN CALIFORNIA

ELEMENTARY SCHOOLS

	1907	1914	Gain Per Cent
Number of teachers	8,246	12,266	48
Number of pupils enrolled....	294,385	422,029	43
Average daily attendance.....	234,624	319,229	36
Number enrolled per teacher..	35.7	33	...
Number of graduates	12,683	24,780	92
Amount of State aid given....	$3,977,295.40	$5,358,579.04	35
Amount of County aid given..	2,866,479.17	4,980,197.76	73
Amount of District aid given (special taxes)	937,001.16	4,591,921.29	390

HIGH SCHOOLS

	1907	1914	Gain Per Cent
Number of schools	179	255	43
Number of teachers	1,188	2,997	152
Number of pupils enrolled....	25,578	65,927	139
Daily average attendance.....	22,333	48,312	116
Number of graduates	2,890	7,477	158
Amount of State aid given for year	$ 237,016.77	$ 642,815.52	171
Amount of District aid given..	2,026,685.50	5,506,429.22	172
Amount bonds voted	429,576.50	1,893,657.00	341

The growth of our normal schools is also worthy of note, and serves to show how we are doing away with the old haphazard method of obtaining our teachers. More and more our schools are being taught by specially trained teachers who are in touch with the most modern educational methods and are thus able to assist their pupils to make the most of the time they spend in the schoolroom. The following table will illustrate the rapid growth of the normal schools and their attendance:

NORMAL SCHOOLS

	1907	1914	Gain Per Cent
Number of schools	5	8	60
Number of teachers	116	229	98
Number of students in Normal proper	1,769	3,994	126
Number of pupils in Training School	2,109	3,068	45
Number of graduates	478	1,538	222
Total receipts	$ 415,012.46	$1,056,998.51	154
Total expenditure	274,785.71	516,389.90	81
Valuation of property	1,149,766.00	2,392,214.00	108

Thus the prospective homeseeker may make his mind easy over the schools of this great and growing State. The little children, no matter where they live, are given good grammar school education. Those who can go further along the road to learning are always within reach of a good high school. If they choose to go still further, normal schools and universities are within their reach. The school system of California has been rated as third by the Russell Sage Foundation among all the states of the Union. Certainly this remarkable position among the galaxy of states is a guarantee of the highest educational opportunity to all who live within our boundaries.

The University of California

By Victor H. Henderson

Secretary of the Board of Regents, University of California

THE University of California is second in size of American universities. In undergraduates, enrolled for a full four-year course, it is largest of them all. And in quality it is recognized as belonging to the first order.

Tuition is absolutely free for all Californians. Women enjoy precisely the same privileges as men—except military drill.

This marvelous growth in a few short decades is due to the fact that the State has always been resolved to have the highest type of university, not a utilitarian makeshift; to the fact that private generosity has given many millions to help the cause of learning, and to the fact that the people of California are eager that their sons and daughters shall have all the training for life that ambition, intelligence, and zeal may win them.

The university started right. It was begun in 1860 as a classical college of the traditional New England type. In 1868 the State took over this ''College of California,'' endowed it with the national land grants, and provided tax support which has waxed ever more generous.

To the fundamental instruction in the humanities and pure science were added courses in mining, mechanical, electrical and civil engineering, applied chemistry, and agriculture. Professional schools were developed of law, medicine, pharmacy, and dentistry, and a graduate school established.

With the arrival of Benjamin Ide Wheeler, formerly professor of Greek and comparative philology at Cornell, to be president of the university, in 1899, came clear and definite declaration that the true university must be a home of productive scholarship, where students may learn how to advance the boundaries of knowledge, receiving their training from men who are themselves continually seeking to win new truths from the unknown.

PUBLICATIONS DEPARTMENT

The establishment of a liberally supported Publications Department, devoted wholly to the issuance of publications which constitute an addition to the world's stock of knowledge, proved a vigorous stimulus to original research, for it insured a means whereby the investigations of creatively minded men in the faculty and in the graduate school might be made available for the world interchange and co-operation of science.

The atmosphere of research prevails in the university. Immediately applicable to human needs is a vast proportion of the investigations so vigorously prosecuted by the College of Agriculture. In other realms of science constant achievement is being made in knowledge of the processes of nature, and in the fields of history, economics, anthropology, philology, and the social sciences in general, new light is being thrown on what man has been doing in the world and which way advancement lies.

Many important fields of research have been entered upon through facilities afforded by specific endowment. Thus James Lick gave to the university the Lick Observatory on Mount Hamilton, the foremost center of astronomical investigation in the world today, where, for example, Director W. W. Campbell has proved such memorable discoveries as that the older a star the swifter its motion, and that the planetary nebulæ move more swiftly than the swiftest stars themselves, a discovery which seems to show that the old nebular hypothesis was based on error, and that the planetary nebulæ are really farther along the path of evolution than the stars, and not an antecedent form from which the stars are made.

ETHNOLOGICAL STUDIES

A study of the life of primitive man on the Pacific Coast, with an elaborate ethnological survey of California, has been supported for many years by Mrs. Phoebe Apperson Hearst. It has resulted in museum collections of great value and the issuance of a dozen bulky volumes.

Tens of thousands of animals and birds have been collected by the California Museum of Vertebrate Zoology, supported by the generosity of Miss Annie M. Alexander, and valuable researches carried on as to how evolution really works.

Study of the processes of life in animal and plant have been carried on for a number of years past through the scientific staff of the Scripps Institution for Biological Research, maintained by Miss Ellen B. Scripps of La Jolla, with aid to the undertaking also from Mr. E. W. Scripps.

And recently munificent provision has been made for attack on man's ancient enemies, the diseases, through the gift by Mrs. Hooper of San Francisco, of property valued at between $1,000,000 and $2,000,000 to endow the George Williams Hooper Foundation for Medical Research. Its staff devote their whole time to investigation of the problems of functional and organic and of tropical diseases.

COLLEGE OF AGRICULTURE

Through the long years when Professor Eugene W. Hilgard and then Professor E. J. Wickson directed the work of the College of Agriculture, it achieved a great work of research. It solved multifarious problems of agriculture in a land where Anglo-Saxons have taken up a task wholly new to their race—that of tilling an arid soil, under irrigation; of reclaiming the desert and of raising the fruits and field crops which in the past Northern races of men have bought from tropical countries, instead of raising them for themselves.

Of late the State has richly increased the specific provision for the work of the College of Agriculture and under the direction of Dean Thomas F. Hunt, new great advances are being made. Students may specialize now in any one of seventeen different agricultural pursuits, choosing as a special profession the citrus fruits, say, or pomology, animal husbandry, landscape gardening, economic entomology, veterinary work, dairying—or any one of many other specialties.

The graduate school of Tropical Agriculture and

Citrus Experiment Station at Riverside is a division wholly devoted to research and to the training of graduate students in methods of research as to plant breeding, soil treatment, the diseases and pests of plants, or other such problems, with special reference to tropical products.

The University Farm of 781 acres of fine rich land at Davis, in the Sacramento Valley, is used to give practical field work to students in the College of Agriculture, and is the site also of the University Farm School, where several hundred young men who have not preliminary training to enter the four-year course in the College of Agriculture are receiving a three-year training for successful farm life.

SPREADING KNOWLEDGE

To spread abroad into general use the new knowledge constantly being won by science the College of Agriculture pours forth a stream of valuable publications, writes tens of thousands of letters to inquirers, reaches scores of thousands through farmers' institutes, teaches 13,000 by correspondence courses in agriculture, and stations a ''farm advisor'' in every county which will provide for local and traveling expenses an amount equal to the salary which the university and the United States jointly furnish. The farm advisor becomes a permanent member of his community; through farm bureaus in every neighborhood he stimulates the farmers to use the most improved modern methods, and he serves as a channel through which the local problems can receive aid from specialists at the university.

Just as the agricultural work of the university receives co-operation from the United States, so the general support of the university is derived from many sources. Of the income of the University of California for the year ending June 30, 1914, which was approximately $2,500,000, there came from the state of California $1,574,376.29; from the United States, $80,000; from the income on the endowment, $279,000. The year's gifts of money for current use or for endowment or for building work were $192,000.

The balance sheet shows assets of $15,710,000, of which $5,540,000 are income producing endowments.

PRIVATE GIFTS

Only private gifts has made possible the work of the university. During the past dozen years the gifts have averaged in value nearly $1,000,000 a year, in lands, buildings, endowments, gifts for current use, additions to the museum, library, or scientific collections, etc.

Mrs. Phoebe Apperson Hearst, for example, gave a museum collection on which she expended over $1,000,000, but which today could not be equaled for less than $3,000,000 to $5,000,000. She built the Hearst Memorial Mining Building at a cost, including equipment, of more than $700,000. She gave Hearst Hall, the women's gymnasium; she has supported the Hearst Scholarships for many years and she has made innumerable other gifts of vast aggregate value to library, museum, individual student, or specific department.

Miss Cora Jane Flood endowed the College of Commerce with $377,000; Mrs. John W. Mackay and Mr. Clarence H. Mackay gave $100,000 for the John W. Mackay, Jr., Chair of Electrical Engineering; Mr. D. O. Mills gave $150,000 to endow philosophy; Mr. Edward Tompkins gave $107,000 to endow the Agassiz Chair of Oriental Languages; Mrs. Sather endowed chairs in history and in classical literature with $140,000 each, and a host of others have made gifts great and small.

BUILDING FOR FUTURE

Of particularly fructifying power was Mrs. Hearst's gift to provide for an international architectural competition for permanent plans for the university.

She pointed out that the university site at Berkeley, with its fine background of lofty hills, its noble seaward prospect, and its charm of picturesque and diversified contour, topography, and natural growth represented a unique opportunity for a splendid architectural development. Most universities, like most cities, have ''just growed'' with lamentable results as regards architecture. She proposed that the distant future should be planned for and an architectural composition wrought out worthy of the State and of the site and of the future of the university.

HEARST PLAN ASSUMES FORM

The Hearst Plan is rapidly assuming visible form. Already completed are the Hearst Memorial Mining Building; the University Library, given by Mr. Charles Franklin Doe, which cost, including the equipment provided by the State, $883,000; Boalt Hall of Law, for which Mrs. Boalt gave $100,000 and the lawyers of California $50,000 more; the Greek Theatre, for which Mr. William Randolph Hearst gave $50,000; the Sather Gate, which cost $36,000, and the Sather Campanile, for which Mrs. Sather gave $225,000; and Agriculture Hall and California Hall, built by the State at a cost of $213,000 and $272,000, respectively.

All these are of granite exterior, with steel frames fireproofed in concrete; concrete floors and roofs of red mission tile. All are of the highest possible type of construction and of fire-resistive quality. And, in their admirable fitness for every-day use and in their noble and serene beauty, Mr. John Galen Howard, supervising architect of the Hearst Plan, has made a contribution to American architecture of the highest and most permanent value. The city-planning movement in California, the cause of all that is good in public architecture, is being profoundly aided by this great and successful undertaking in architectural composition on the broad scale.

And, in November, 1914, the people of California set the seal of their approval on the great project of the Hearst Plan by voting $1,800,000 in the form of the ''University Building Bonds,'' proposed by the alumni through initiative petition, this to be applied to the enlargement and completion of the present monumental library and the erection of three more permanent buildings—a chemistry building, a second unit of the agricultural group and a great class-room building large enough to accommodate 3,500 students at one moment under one roof.

Leland Stanford Junior University

By O. L. Elliott

Registrar of Stanford University

STANFORD UNIVERSITY owes its existence to the public-spirited liberality of Governor and Mrs. Stanford, and to the conviction that through the promotion of education their great fortune could be made of most use to humanity. Their only child, the center of their hopes, died in 1884, in his sixteenth year. In creating a university as a memorial to the life thus cut off, it seemed to the bereaved parents that they would be sharing with all the children of California something of what would have been given to their own son had his life been spared.

When it came to the accomplishment of their purpose, two main ideas were kept in mind. First, the outward habitation of the university must be beautiful in design and solid in execution. Again, they would emphasize the practical nature of a university education, which while not neglecting breadth of training, should be so directed as to fit its possessor for some useful calling in life. The founders of the university were not college trained, and their notion of what was necessary to the accomplishment of their purpose was naturally vague. But in its broad and comprehensive features the actual university has conformed to their general idea; and if in its first quarter century of history Stanford University has made a sensible contribution to the educational progress of the Pacific Coast, it is because of the boldness and the vigor with which the university has stressed definiteness of aim and result as the possibility and the glory of the higher education.

A PEACEFUL VALLEY

The site of the university is the Palo Alto estate of the founders in the Santa Clara Valley—a valley famous for its beauty, fertility, and excellence of climate, where, free from the rigors of Eastern winters and the extremes of Eastern summers, sheltered from the fogs and harsh winds of the coast and from the summer heat of the interior valleys, with a rare ocean quality in the air, the seasons are one succession of springtime and autumn. The buildings have been placed on the broad plain sloping up from the bay to the foothills of the Sierra Morena. Here the old mission architecture—the long, low buildings with the wide colonnades and open court—has been reproduced on imposing scale. The main university buildings consist of two quadrangles, one surrounding the other, with a façade 894 feet in length. The soft buff sandstone, the great expanse of red-tiled roof, the wide arcades, the simple but imposing arches, the glimpses of trees and foothills and mountains, give an impression of academic seclusion, serenity and beauty whose fascination deepens as the months slip by under blue skies and flooding sunshine. Other detached buildings for various purposes have been added, and a considerable area, including the first foothills, has been covered with residences of faculty, college fraternities and clubs, and occasional outsiders who have made their homes upon the university campus.

A FORTUNATE SELECTION

The carrying out of their educational plans the Stanfords wisely entrusted to other hands. They were singularly fortunate in their choice of president. However happily the generous vision of the founders has guided the development at Palo Alto, in its characteristic features, in its freedom from hampering tradition, in the autonomy and untrammeled opportunity of the individual department, in its call to the individual student to strike straight for his definite goal, in its exaltation of genuineness and disdain of sham, the university bears the ineradicable stamp of the genius of David Starr Jordan. From his buoyancy, directness, and imperturbable optimism, and the response which this evoked from his first faculty, the university took on a tone and meaning and spirit which not all its staggering vicissitudes have succeeded in effacing, and which have carried the name and fame of Stanford far and wide.

In its internal organization, and in the scope of its instruction, Stanford conforms to conventional types. There are twenty-six departments, each representing a larger or smaller field of knowledge, and covering ancient and modern languages, philosophy, education, mathematics, history, economics and political science, the physical sciences, the biological sciences, and the more formally professional schools of law, medicine, and engineering. Half the students perhaps enter without any definite professional or vocational goal, and seek among the twenty-six departments for that general education so pedagogically popular and so hard to define. They are guided through the mazes of the curricula by means of the major subject system which allows the student, under the advice of some one department, to group around the courses in that department those supplementary and complementary studies which seem to promise the desired achievement.

But there are two characteristic items which particularly reflect the Stanford contribution to educational progress. First, the university undertook to remove, not set up, artificial barriers between the high school and the university. The educational process it regarded as one, the university taking up the task where the high school leaves it. Stanford does not prescribe particular subjects for admission, but from the outset has held the satisfactory completion of a standard high school course the adequate and sufficient requirement for admission. The other point of departure was the university's recognition of the equality and autonomy of departments. Each department, representing a great field or division of knowledge, was to receive major students with a primary view of inviting them to a (more or less complete) mastery of that field of knowledge. Each department aimed to provide equipment and opportunity for independent work, thus making of the department, for those who had the ability and the calling, the equivalent of a vocational or professional school for those interested in its vocational or professional bearings, and a research laboratory for those devoted to pure scholarship. This challenge to the interest and enthusiasm of the student was not to be obscured by unpalatable curricula, compounds of faculty wisdom and senatorial courtesy, which must first be passed through the system. The student came at once under the direction of the chosen department, and preliminary and supplementary studies were planned with direct reference to the individual student and the end in view. The opportunity for thus making the educational process more interesting and more effective, while realized in fact in varying degrees only, has nevertheless stamped the whole spirit of the university.

STORMS WEATHERED

The university was opened in October, 1891, and 550 students were registered the first year. In 1893, following the death of Mr. Stanford and the financial panic of that year, the university's resources were completely tied up and for a time its continued existence seriously threatened. Largely through the unflinching courage and devotion of Mrs. Stanford the storm was weathered, and in 1898 another forward movement began. This was again interrupted by the earthquake of 1906 with its enormous damage to the university buildings. Growth in numbers has therefore not been rapid in comparison with that of other universities. The attendance figure has this year (1914-15) for the first time reached and passed the 2,000 mark. The university endowment is not far from twenty-five millions. Not all of this is interest bearing, and without tuition fees (except in law and medicine) the income is not large as modern university incomes go. The present number of students about reaches the limit which the trustees are willing to consider that they have means to provide for. The immediate problem is how to restrict the very natural tendency of a live university to grow. Whatever readjustments the future may require if only the present momentum be maintained Stanford University must continue to be, as it has been in the past, an important factor in the educational development of California and the Pacific Coast.

After twenty-two years of service President Jordan resigned in 1913, and the trustees created for him the new office of chancellor. His successor in the presidency was Dr. John Casper Branner, professor of geology from the beginning of the university, followed by Dr. Ray Lyman Wilbur, the present president.

The Rebuilding of San Francisco

Arisen, arisen, triumphant o'er fate,
Thy splendor renewed at the sea's Golden Gate.
Hail, brave San Francisco, thou bravest and best!
March on to thy glory, in front of the West.
    We wept at thy sorrow
      And ever we pray,
    God guide thy tomorrow!
      God bless thee today!
And praying, we pledge thee united to be,
To keep thee the queen of the earth's greatest sea.

JAMES HENRY MACLAFFERTY.

(From the London "Times," January 8, 1909.)

[An article in the financial and commercial supplement of the London "Times" of January 8 on the rebuilding of San Francisco contains so much of value to this city and is so full and intelligent a statement of the resources of the city that it is republished here in full. The article is by a special correspondent sent out by the "Times" to secure accurate and first-hand information regarding conditions in this country. Coming from a source so unprejudiced and published in a newspaper of such high standing and wide influence in the British financial world, the article can not fail to do San Francisco a vast deal of good.]

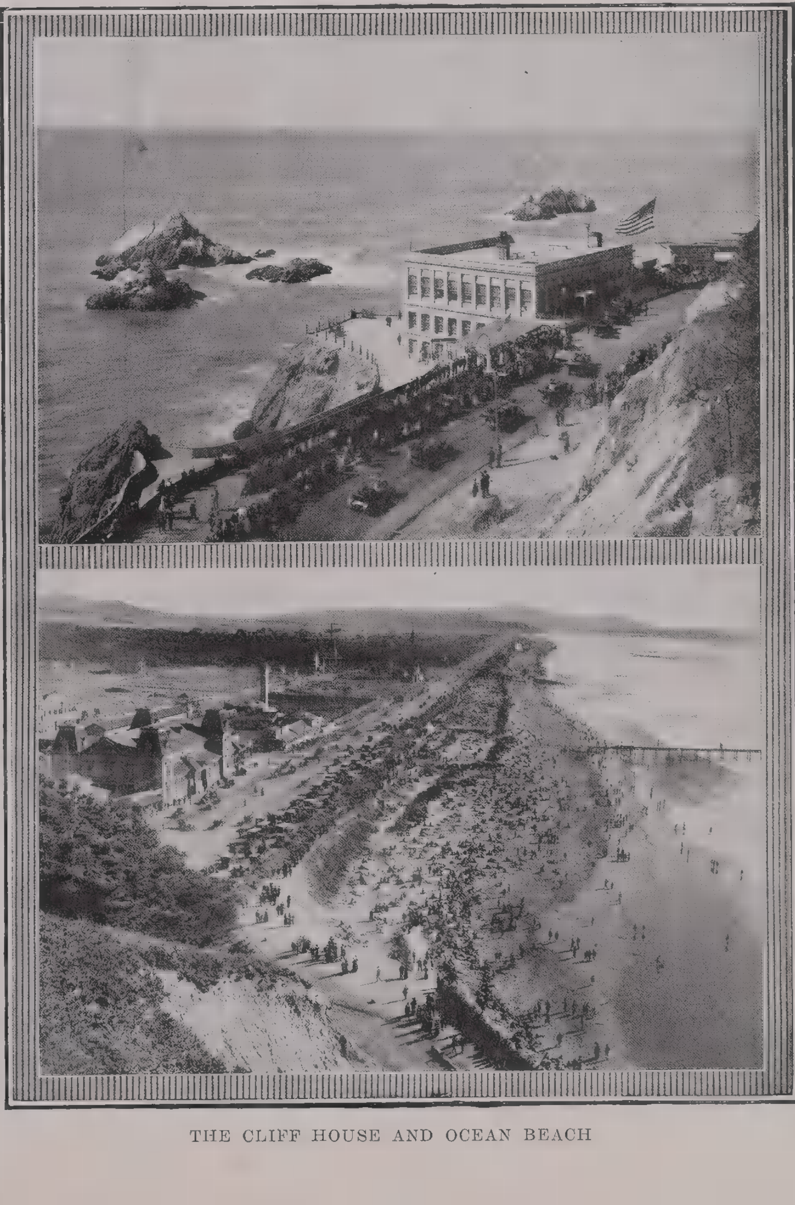
SAN FRANCISCO is the key to the Pacific. In England, people have often asked your correspondent in amazement, "Are they really building San Francisco? Why haven't they moved it somewhere else?" The reply is, "There is nowhere else for it to be situated." The geography of the world demands a great city at San Francisco. As is well known, all the western coast of both North America and South America is peculiarly lacking in harbors. There is scarcely a port worthy of the name within six hundred miles of San Francisco, north or south; but the Golden Gate at San Francisco gives in all weather safe entrance between its towering cliffs to one of the finest land-locked harbors in the whole world. Within there is anchorage extending thirty miles

FERRY BUILDING, SAN FRANCISCO

or more along either arm of the bay. At the head of the eastern arm is the outlet of two navigable rivers, the Sacramento and the San Joaquin, which together drain for seven hundred miles California's greatest valley empire, whose fabulous wealth is known to all the world.

NATURAL ADVANTAGES

This alone demands a city at San Francisco. But when we consider that it is the natural meeting-place for the trade of the gold mines of Alaska, the timber and grain of the Pacific Northwest, the tropical fruits of Hawaii, and the cattle of the Southwest, we see still further the necessity of a city within the Golden Gate. In addition, the opening of the Panama Canal will make San Francisco the distributing center for the trade of Europe with the western states of America in the same way that New York is for the eastern states. Another fact not commonly known is that the shortest route —that following the great circle—between Panama and Yokohama or Shanghai passes within a few hours' journey of San Francisco. The distance from San Francisco to Yokohama is 4,536 miles, and to Panama 3,277, a total of 7,813 miles from Panama to Yokohama via San Francisco, while the shortest possible route is 7,650 miles, which is but 163 miles shorter. San Francisco is the one port of call in the long journey from Panama to the Orient, and as that trade increases she must reap a rich harvest. We

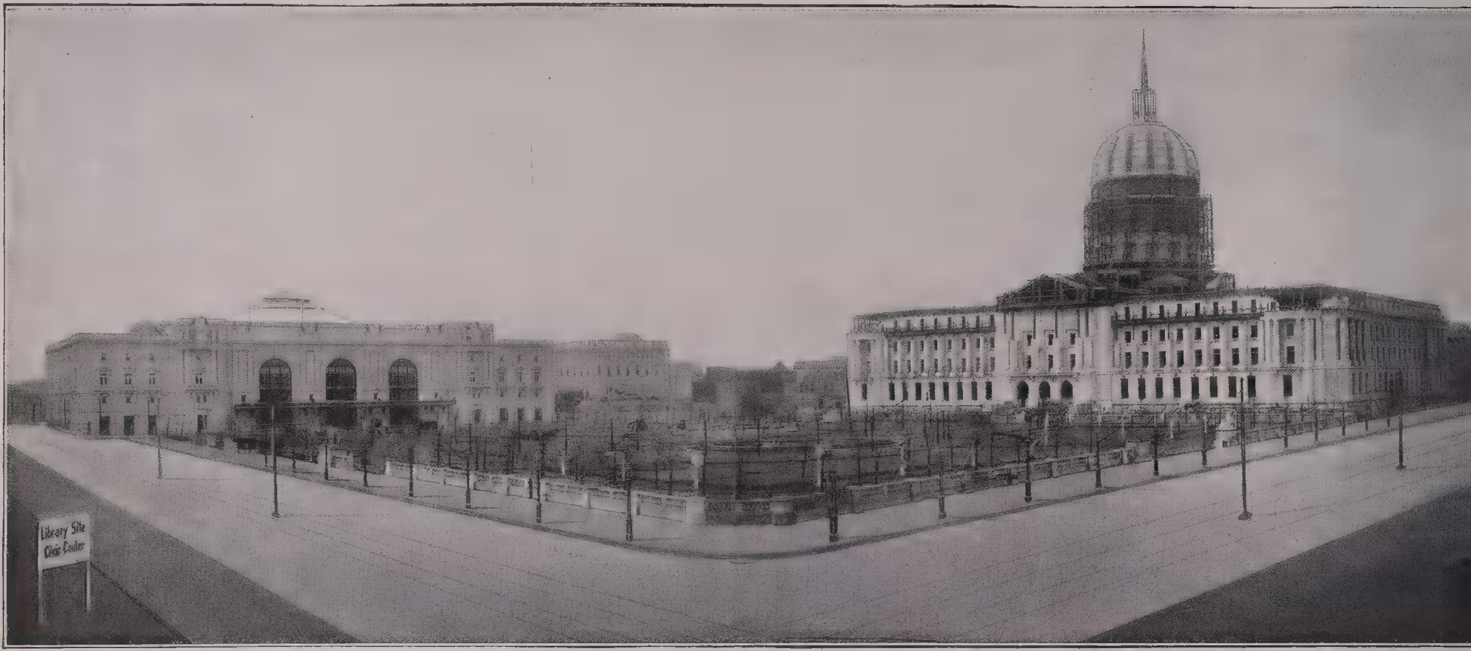


THE CLIFF HOUSE AND OCEAN BEACH

thus see why the people of San Francisco are willing to risk everything in the rebuilding of their city. One of the great cities of the world must be located on that harbor, and there is no other spot within reach of the harbor any less subject to earthquake than the present site. Engineers declare, on the other hand, that the city can be made earthquake proof, if properly constructed.

ABUNDANCE OF CAPITAL

It is because of these natural advantages of which I have spoken that during the last half century so much wealth has accumulated in the city. By reason of that wealth alone could the recovery from the recent disaster have been so rapid. The assessed valuation of the city in 1906 was $376,136,742; in 1908 it had increased to $454,332,820. The bank clearings in 1906 were $1,811,175,374; in 1907 they reached a total of $2,320,662,114. The import duties, which in 1905-06 were $7,424,196, increased in 1907-08 to $10,144,010. This volume of business is very large for a city of less than 500,000 inhabitants, and it has steadily increased since the fire, as these figures show. What is of interest here is that this trade has accumulated wealth enough for San Francisco capitalists to rebuild the city with their own money. Of the enormous sum that has been spent on building operations in the last two and a half years, only about $5,000,000 has come from the outside. The reason for this is that until recently Eastern capitalists were unwilling to trust there money here, while the people on the spot not only had faith in the future of the city, but they had money, made here, sufficient to back up their faith.



Library under construction

Auditorium, Larkin Street
Convention place for meeting of Norwegian Synod in 1915.

THE NEW CIVIC CENTER

City Hall
McAllister Street

Million Dollar State Buildi
to be erected here

The money received from the insurance companies was largely spent in temporary repairs, and, if we are to believe report, in diamonds and automobiles; for a great wave of extravagance seems to have set in during the first year after the catastrophe. The greater part of the funds for the reconstruction came from stored-up capital, which had been lent in other Western cities, and even in New York, though, of course, much of the insurance money went in that way as well.

CLASSES OF BUILDINGS

Building permits to date cover a probable expenditure of $130,000,000, though the actual figures amounted on October 1 last to $115,235,253, the difference depending on the fact that finished buildings usually average 10 per cent higher than the estimates of the architects. It is greatly to be regretted that, of this enormous sum, only $17,411,458 has been expended on Class A buildings. Class A represents the absolutely fireproof, earthquake proof, steel and stone building, with wire-glass windows, automatic metal doors, and metal interior fittings. All the old Class A buildings, so far as is known, withstood the earthquake perfectly, and even after the fire that raged about them were in a condition to be refitted, and are now in regular use. Class C buildings, on the other hand, on which $37,000,000 has been expended, consisting of brick walls and steel girders, and corresponding to the common style of construction in English cities, suffered some damage from earthquake, and were a total loss in the fire. It seems economically impossible to prohibit this class of building, when labor and materials are so high, but the people who spend their money on that style of construction in the business district of San Francisco have not learned the lessons of the recent disaster. A considerable portion of the total amount has gone into refitting buildings only damaged by the fire, as the 21-story Call Building, while $44,000,000 has been put into purely wooden or "frame" buildings in the outlying districts. These, where properly constructed, are safe against earthquake, but are, of course, subject to fire, and the insurance rates on them are necessarily high.

In fact, the figures show that the loss by fire in the United States, where wooden buildings prevail, is seven times as great as in England and on the continent of Europe. Naturally the insurance premiums are correspondingly high to meet these risks.

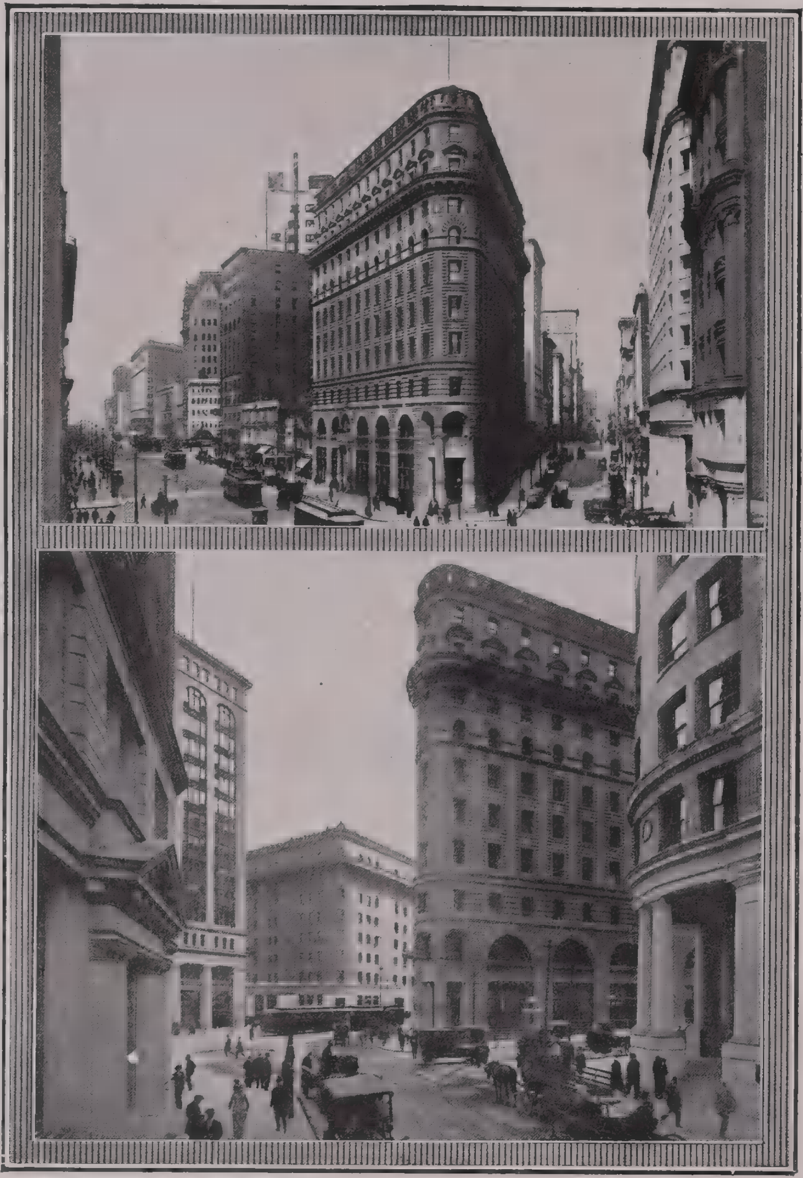
INSURANCE PAYMENTS AND PREMIUMS

In the matter of insurance, the total amount paid by the various companies to date is something over $200,000,000. The exact figures can not be obtained, because some companies do not care to make public how badly their resources were depleted. A few millions will still be paid, either through process of law or by bankrupt companies. All the English companies doing business here are considered to have behaved admirably, some of them settling on "a dollar for dollar" basis, but three (which had special conditions in their policies regarding earthquakes) reduced their payments by 10 to 25 per cent. The English companies paid in all about $65,000,000. The Royal, one of the heavy losers owing to their loss-paying record, has since, it is stated, doubled their business on the Coast, with Liverpool & London &

FLOOD BUILDING, HEADQUARTERS OF SOUTHERN PACIFIC RAILROAD COMPANY

Globe running them a close second. The former is erecting a $1,000,000 building on its property here, and the Atlas will soon follow suit; but the policy of the Liverpool & London & Globe has not yet been made public.

The American insurance companies also, for the most part, met their obligations well. The Fireman's Fund, the largest local company, levied three 100 per cent assessments on all its stock. But not a single German company met its obligations in full, while some of them refused to pay at all.



Upper—Crocker Building, home of the Crocker National Bank, in the foreground. The buildings of the retail district can be seen up Post Street.

Lower, left to right—Wells Fargo Nevada Bank Building, Merchants National Bank Building, Palace Hotel, Crocker Building, and First National Bank Building.

The question of reinsurance has been a vital one in the rebuilding of the city, for some of the property holders apparently felt that they would not be able to get their property insured if they rebuilt. All the companies, however, which met their obligations have re-entered the field. But they have raised their already high premiums from 20 to 33⅓ per cent on what was left of the city. This was owing to the disorganization of the fire-fighting facilities and to the congestion of the business of the city in the residential districts, which were not constructed for the purpose. Only a few days ago, however, all insurance rates dropped to the figures at which they stood before April, 1906, which is in itself a significant commentary on the progress of rehabilitation.

MATERIAL AND LABOR

A few items regarding the cost of building may here be of interest. Of course, there were famine prices paid immediately after the disaster; for instance, bricklayers received a minimum of $1 (4s 2d) an hour and plasterers got even more. But at present wages have returned, almost without exception, to what they were formerly. The regular union scale of wages for carpenters is now $4 (16s 8d) for an 8-hour day, for plumbers $5 (20s 10d) and for bricklayers $6 (25s). Many of these men own or are paying for their own homes, for the cost of living in San Francisco is not higher than in London.

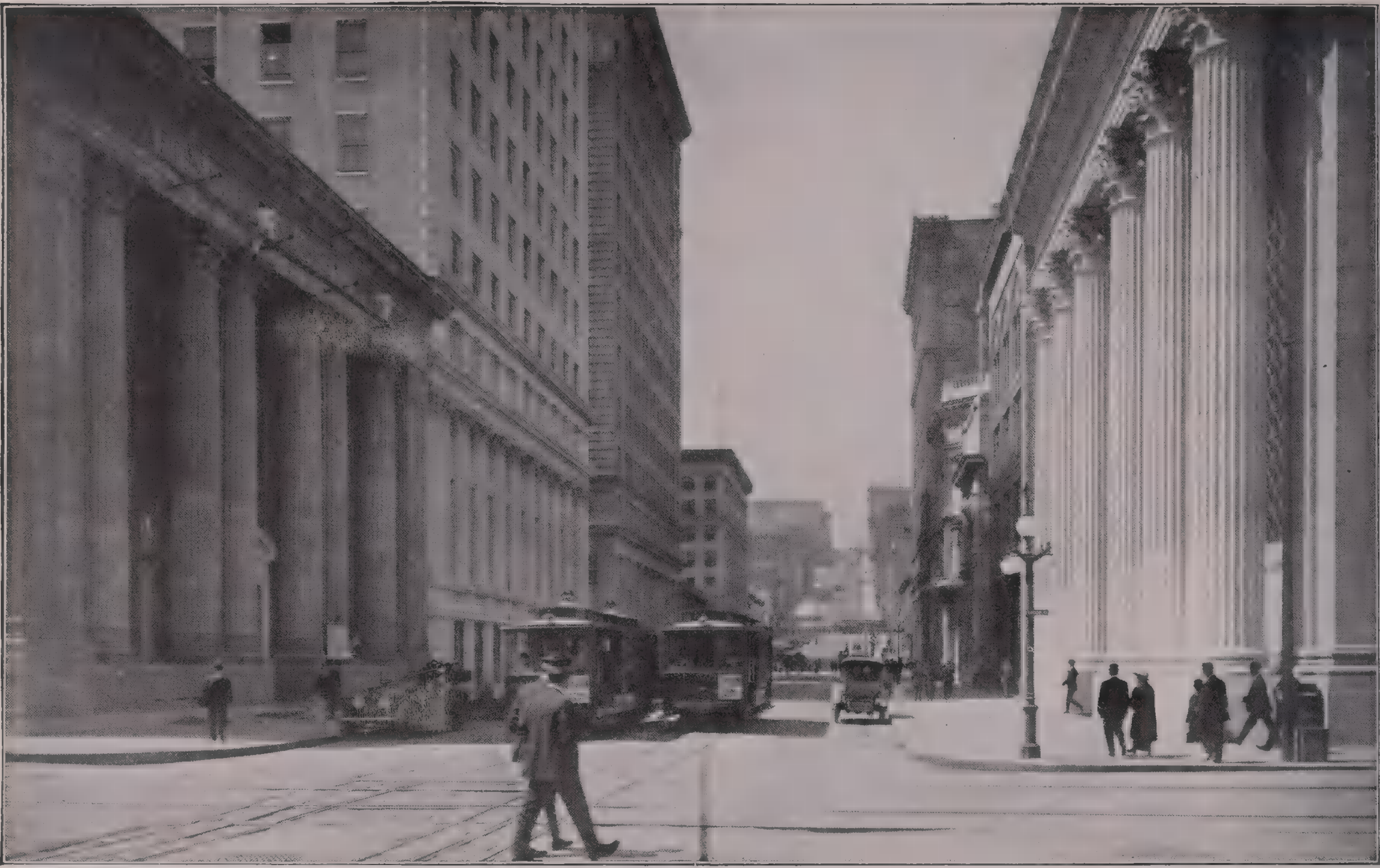
THIRD, KEARNY AND MARKET STREETS

Foodstuffs cost about the same, while rents are, if anything, cheaper; but clothing is slightly dearer. Naturally these wages materially affect the cost of building, but not so much as would be expected, on account of the ambition and high efficiency of the employes. The cost of building materials was for a time almost prohibitive; lumber jumped from $15 a thousand feet to $32, while common bricks went to $12.50 a thousand, and imported cement was $3.10 a barrel. Prices in general have subsided to a level somewhat below that which prevailed before the earthquake, lumber being $14 a thousand feet and bricks $9 a thousand.

OPTIMISM PREVALENT

Undoubtedly the financial depression of 1907 had

ONE OF THE PROMINENT BUILDINGS OWNED BY DR. HARTLAND LAW



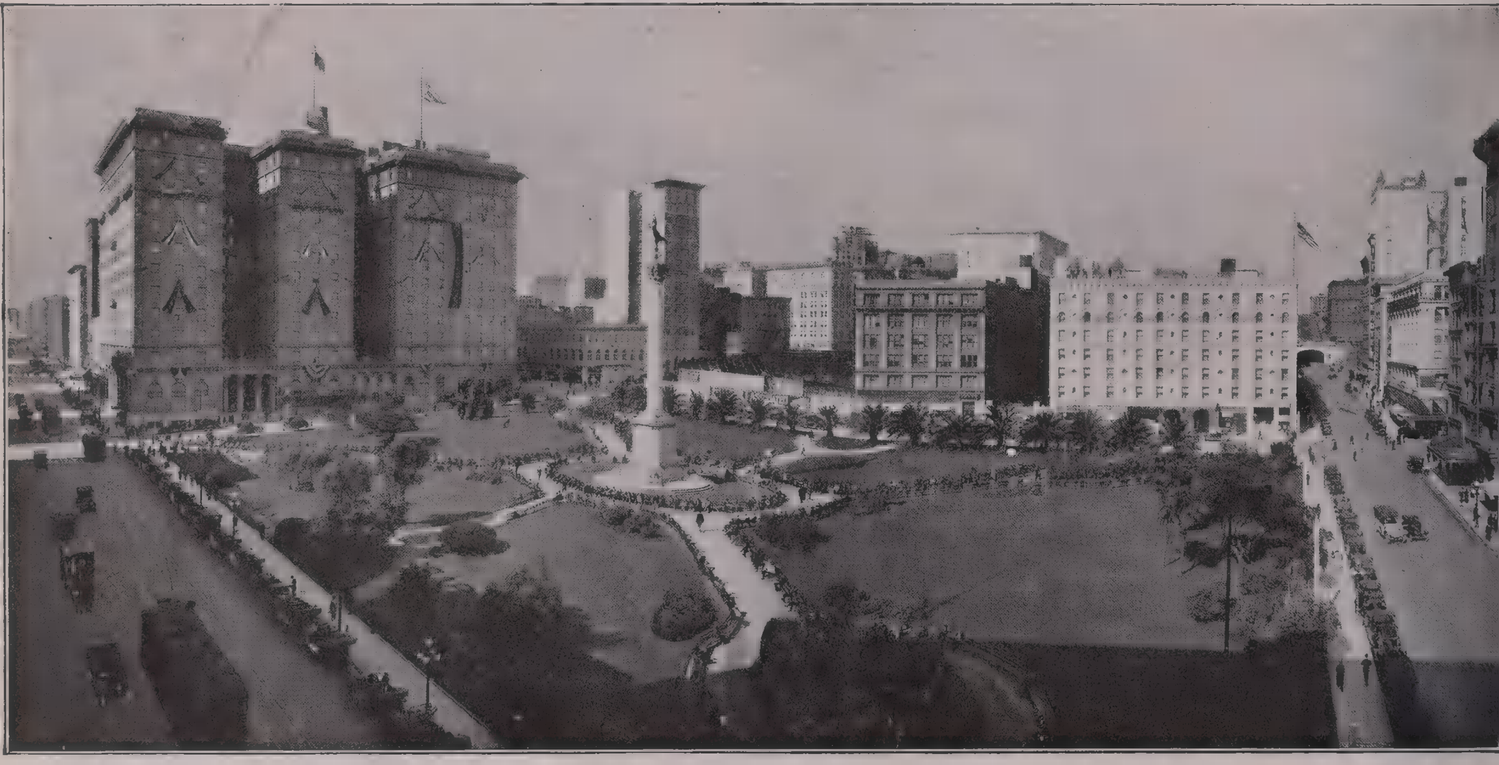
Fireman's Fund Insurance Building

Insurance Exchange Building

Merchants Exchange Building (Chamber of Commerce)

Bank of California

LOOKING WEST ON CALIFORNIA STREET, FROM SANSOME



Geary Street

St. Francis Hotel

Dewey Monument

Stockton Street Tunnel
Stockton Street

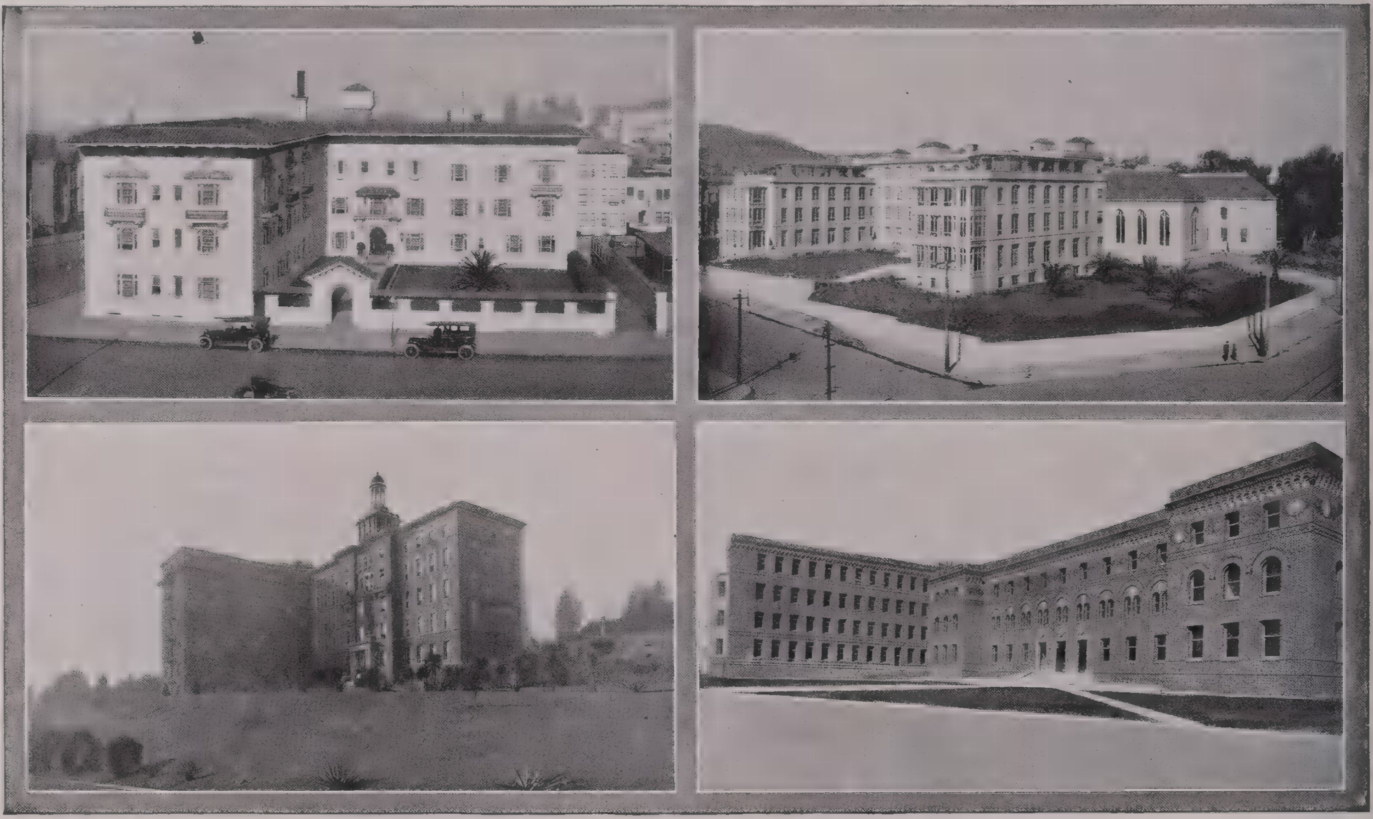
UNION SQUARE

THE HIBERNIA SAVINGS BANK

much to do with the present downward tendency of prices. Though a blessing very much disguised, the panic was unquestionably a blessing to San Francisco. For such is the optimism of these people that there was grave danger of their entering on an inflated building "boom," and overbuilding, far beyond any possible needs of the city. The panic made building cheaper for those who could afford to build at all, but prevented much wild speculation. At present there seems little probability of the building operations keeping more than even pace with the demand. The present needs for offices and shops have pretty nearly been supplied. The era of building business blocks must soon give place to an era devoted to constructing public buildings, schools, theaters, libraries, hospitals and churches. Then must follow an extension of factories and docks. And by that time, if San Francisco optimists are right, there will be a fresh demand for offices and business blocks.

THE EMPORIUM, CALIFORNIA'S LEADING DEPARTMENT STORE

And here it should be said that every man in this energetic city seems to be an optimist. After having talked with prominent men in every department of life, your correspondent finally said to a young barrister who had introduced him around the club, ''Now show me a pessimist. I want to hear the other side of this story.'' To this the gentleman replied, after some thought, ''I don't know any pessimists, unless it is old Mr. ———, who has got his millions and gone to the country to live.'' The unbounded confidence of the people of San Francisco is well shown in the way land values have been maintained in the last two years. Prices have remained practically stationary, while sales, though not so great as in the phenomenal year of 1905, have been about the same as in years previous to that. Land sales in 1904 amounted to $45,000,000, in 1907 to $31,000,000, while in 1908 they will not fall behind $40,000,000. It is notable that at the time of the fire the mortgage indebtedness of the city was $86,000,000, or about 16 per cent of the actual value of the property. This is probably the smallest mortgage percentage of any American city, and will allow of much heavier borrowing if necessary. But undoubtedly mortgages on property within the burned area, on which all income has ceased, will force much land into the market within the next two years, and may even cause the market to break to some extent. Any great reductions, however, are not to be expected.



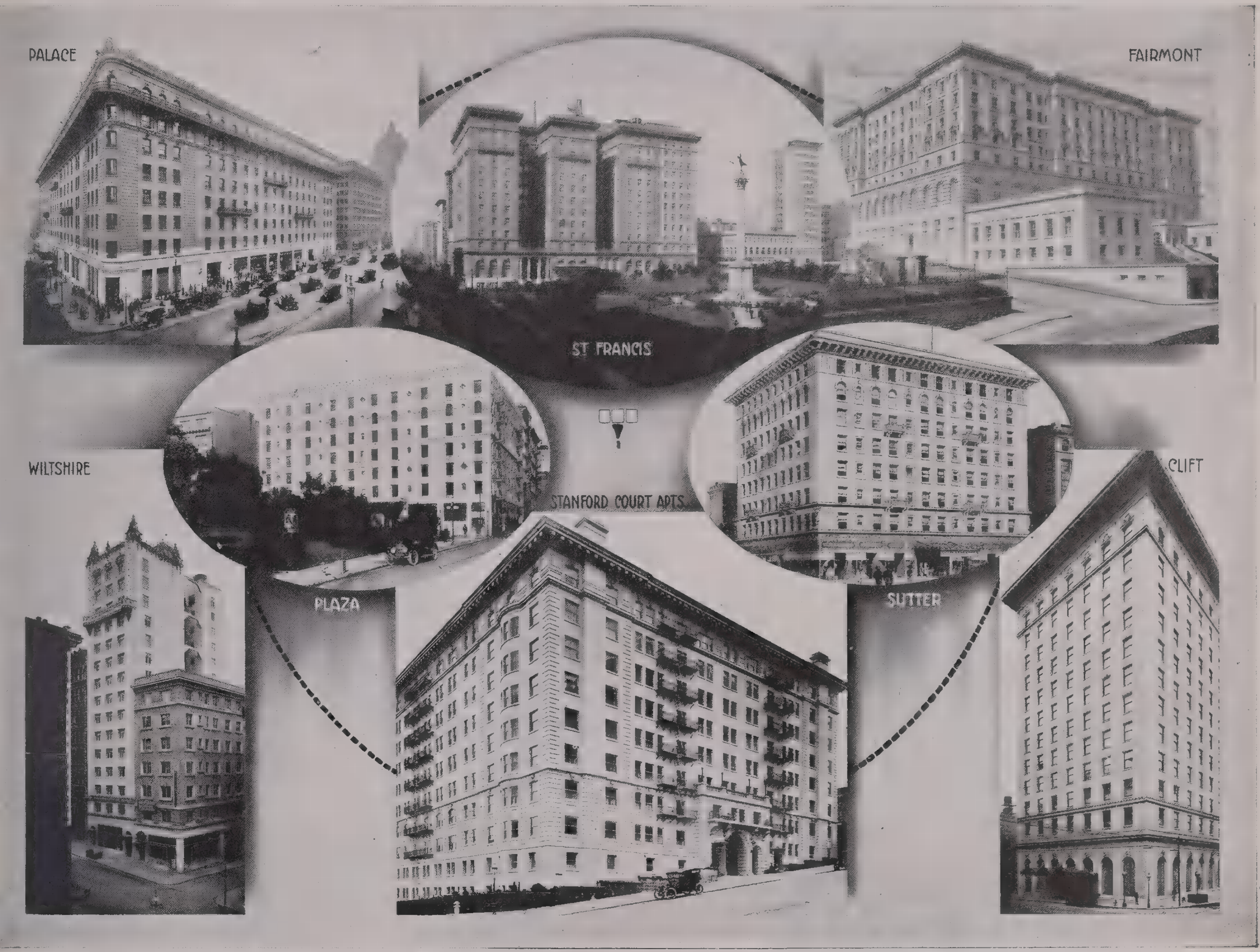
SAN FRANCISCO'S LEADING HOSPITALS

THE CITY'S CREDIT

A recent test of the increase of confidence in the future of this city among Eastern business men, and the consequent influx of capital, was the sale on September 8 of city bonds. At the beginning of 1908 the only debt of the city was a single issue of 3½ per cent bonds, amounting in all to $3,436,600, less than 1 per cent of the assessed valuation of the city. In May of last year a new 5 per cent bond issue of $17,160,000 was authorized, to be applied for the provision of fire protection, schools, hospitals, etc. Only $3,000,000 of these bonds have as yet been put on sale, and they were subscribed for many times over. An Eastern security company, F. H. Rollins & Co., sent out several financial experts to examine into conditions before investing. In their private report to their New York office were the following statements:

''It is practically impossible for any one who has not been in San Francisco recently to comprehend the wonderful recovery of the city. On every hand are evidences of active business and prosperity. In our drive along the waterfront we are reminded of conditions as they exist in New York, and we firmly believe that San Francisco is as important a city to the Pacific Coast as is New York to the Atlantic Coast. . . . In regard to the issue of 5 per cent bonds of the city, which are to be sold on September 8, we consider them an absolutely safe and sound investment. The debt of the city is less than 1 per cent. The city has upward of $3,000,000 in gold in its vaults today, and when you come to compare San Francisco with other large cities, the bonds look fully as attractive; and when considering that we are figuring on offering the bonds to the investing public on a 4½ per cent basis, they will be absolutely the best municipal bargain in the market.''

On the strength of this report the bonds were bought at a 7 per cent premium. The remaining $14,000,000 worth of bonds will go on the market as the work progresses, and the indications are that San Francisco will not have any difficulty in financing all the necessary improvements.



LEADING HOTELS OF SAN FRANCISCO

Some of the Leading Men in the Rebuilding of San Francisco

MUCH has been written about the earthquake and fire which devastated San Francisco in 1906, but very little about the efficient and energetic men who so unselfishly responded to the call of the mayor and as the ''Committee of Fifty'' took charge of the relief work and laid the foundations of that spirit of optimism which resulted in the marvelous reconstruction of the city.

On the morning of April 18, 1906, at 5.13 o'clock, San Francisco was visited by one of the most appalling disasters of modern times. An earthquake of forty-three seconds duration wrecked many of her buildings and started fires everywhere throughout the city; fifty-two separate and distinct fires at one time.

Most of the damage to buildings caused by the earthquake was the result of poor construction or because of insecure foundation on ''filled-in'' land, and was far less in actual extent and seriousness than has generally been supposed.

In the early days the waters of the bay came up close to the hills and large tracts of made land were, at the time of the earthquake, closely built up with business blocks. It was this area that suffered most from the direct effects of the temblor, but even here the damage was not general and could soon have been repaired.

It was the destruction of the water mains by the earthquake which doomed the city and for three days rendered futile the efforts of the fire department and hosts of volunteers to control the situation. In three days 490 city blocks and portions of 32 others were destroyed, a total of 2,593 acres, or 4.05 square miles. Enough buildings were burned to line both sides of a street 100 miles long. Over 300,000 people were rendered homeless.

The mayor immediately appointed the following "Committee of Fifty" to handle the relief work: James D. Phelan, Herbert E. Law, Thomas Magee, Charles S. Fee, W. F. Herrin, Thornwell Mullally, Garret W. McEnerney, W. H. Leahy, J. Downey Harvey, Jeremiah Deneen, John J. Mahoney, Henry T. Scott, I. W. Hellman, George A. Knight, I. G. Steinhart, L. G. Murphy, Homer S. King, Frank B. Anderson, W. J. Bartnett, John Martin, Allan Pollok, Mark Gerstle, H. V. Ramsdell, W. G. Harrison, R. A. Crothers, Paul Cowles, M. H. de Young, Claus Spreckels, John McNaughton, Dent H. Robert, Thomas Garrett, Frank Shea, Joseph Reid, Albert Pissis, Thomas P. Woodward, Howard Holmes, George Dillman, J. B. Rogers, David Rich, H. T. Creswell, J. R. Howell, F. Maestretti, J. S. Tobin, George Towney, E. B. Pond, George A. Newhall, William Metson, Frank Lane, William Magee, Rufus P. Jennings, Willis Polk, C. E. Boss, Robert H. Countryman.

To the committee the following well-known men were subsequently added: Andrea Sbarboro, R. B. Hale, Charles S. Wheeler, Rev. Philip O'Ryan, Bishop Nichols, Archbishop Montgomery, John W. Ferris, Dr. Morris Herzstein, Samuel M. Shortridge, Gustave Sutro, T. L. Ford, Francis J. Heney, J. J. Lerman, John McLaren.

Through this prompt action of the city officials and the co-operation of the government troops under General Funston, admirable order was preserved during these three terrible days and the subsequent weeks before reconstruction began. There was little looting or disorder, the saloons being closed and the troops in charge.

Almost immediately relief supplies began to arrive and eventually the total subscriptions reached the sum of $9,015,812.23.

The refugees were at first housed in tents furnished by the army and later many were provided with portable houses at the nominal rental of $6 per month, the houses becoming the property of the tenants at the end of a specified time.

The downtown merchants lost no time in resuming business. Stores, dwellings, shacks and tents in Fillmore Street, a former small business center in the residence district, which escaped the fire, were utilized and within a few weeks frame business blocks had been erected in Van Ness Avenue, which was transformed into the main business street of the city.

Before the bricks were cool contracts had been let for rebuilding on many of the old sites and six months

VIEW OF SAN FRANCISCO, "THE CITY OF DESTINY," TAKEN FROM THE TOP OF NOB HILL after the fire six thousand buildings had been erected.

A new building ordinance was passed early in June, specifying the requirements of various classes of buildings and another ordinance fixed the new fire limits to include most of the burned district.

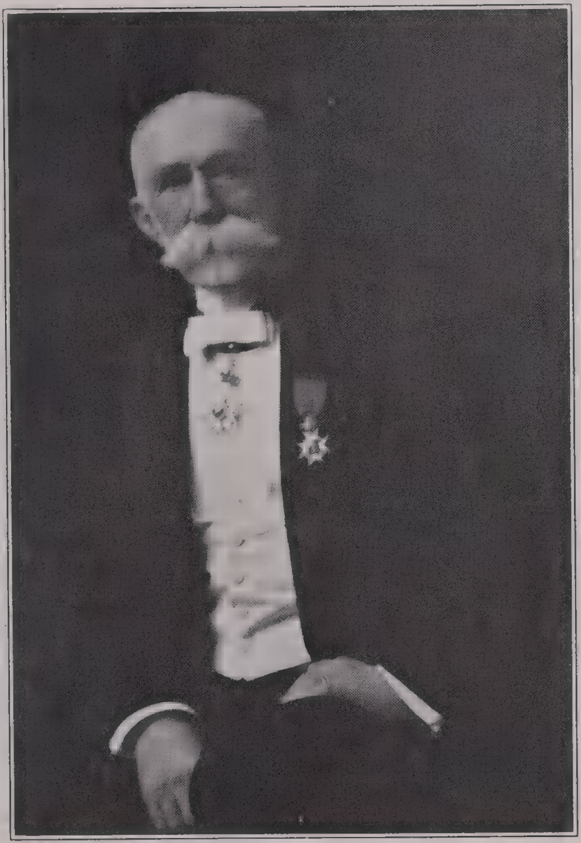
The lesson of the fire together with these new building laws resulted in the construction of the most modern and fireproof buildings. Those buildings which had only been gutted by the flames were restored and new concrete and steel skyscrapers arose throughout the downtown district.

San Francisco, as rebuilt, has the finest and most substantial buildings in the world. The energy of her citizens is marvelous, and is well exemplified by the statement of Frederick Palmer, the well-known war correspondent, who was sent to write up the disaster for an Eastern publication, when asked if San Francisco would ever be rebuilt, Palmer answered, "If they had an earthquake like that every day those San Francisco men would invent ball-bearing buildings and keep right on doing business."

So quickly did the city rehabilitate herself and regain her commercial prestige that the bank clearances for June, 1906, two months after the fire, were $121,677,692.77, only 9 per cent less than in June, 1905, and in July, 1906, the clearances were $160,631,793.81, or 8¾ per cent more than in July of the previous year. This, after a total property loss estimated at $1,800,000,000.

Many of the men who were on the "Committee of Fifty" have interested themselves in the project outlined in this book. Others who have contributed materially to its success and not otherwise mentioned in this volume are: Dr. Hartland Law, E. S. Hueter, M. Johnsen, James Nissum, Jacob Petersen, Alexander Hamilton, John Kirkpatrick, J. H. Kruse, Henry Miller, E. J. de Sabla Jr., William J. Dutton, R. Tobin, John Barneson, E. Stewart, Alfred E. Anderson, J. W. Fricke.

Lutherans Who Have Done Their Part in the Development of the West



CONSUL HENRY LUND

Knud Henry Lund, generally known as Henry Lund, was born in Moss, Norway, October 5, 1832. His father, Christian Fred. Lund, was a leading merchant in his home city. His mother's name was Anna Maria, née Magelsen. He was educated in the state schools. Special stress was laid on branches fitting him for entering commercial life. In 1850 he emigrated to America, arriving at New York. The tidings of the famous gold discovery in California had been heralded throughout the world. New York was all agog at the time of Lund's arrival. Everybody's mind was set on going to California. But in those days there was no transcontinental railroad to resort to; the trip to the West had to be made around Cape Horn or via Panama—in either case a most laborious and hazardous journey. He came to San Francisco in the month of January, 1851. Five months after his arrival the little town, destined to became a great metropolis, was destroyed by fire. Here the hopeful young argonaut met his first disappointment. The house where he stayed was wiped out of existence and with it all his earthly possessions, a little cash and a chest with a few things in it. Then he went to the mines and passed several months there prospecting. His success varied. At times fortune smiled upon him and then again it frowned, but Mr. Lund had the right metal in him. He never tired, he never was known to become discouraged, and so he stayed until he had "made good" in the mines. After some months he returned to San Francisco, the miners' haven and gold-seekers' camp. Those were interesting days in California. The gold fever ran riot on every hand. To prospect for gold was on everybody's brain. Glowing reports concerning copious finds of gold had also come from Queen Charlotte Island off British Columbia, and people's attention was temporarily diverted northward. Sixty prospectors—Mr. Lund included in this number—formed a company fully equipped to go on a gold-mining expedition to that distant isle of lurid fame. But Dame Rumor also had it that an expedition to Queen Charlotte Island would be a most dangerous undertaking, as it might ultimately result in massacre by the wild Indians. So this expedition of sixty prepared themselves for the worst, taking along a full equipment to meet any onslaught by the Indians—cannon, firearms and weapons of every kind were provided. It was also told that gold was so plentiful up there that it had to be carried off by sack-fulls, so the party took along plenty of sacks. Arriving there they found, as reported, enough of wild Indians and not a little gold dust and nuggets in the possession of the natives. The report concerning the hostility of the Indians was also true, for when learning of the foreign visitors they became very hostile. One night the watchman of the expedition gave alarm, passing the word that they were surrounded by a host of Indians. A camp-fire was lit on the ship's deck and by the bright, flickering flames the darkness was dispelled, and behold, a swarm of Indian canoes thronged about the ship, and the occupants were ready for the butchery. But when they noticed that the strangers on board the ship were ready for them and now about to fire the cannon they raised the white flag, praying for mercy and asking for a parley. It was granted. Three Indian chiefs came aboard the ship. Terms of peace were agreed upon and hostilities ceased, but the members of the expedition were apprehensive. Fearing an eventual surprise which might result in disaster, they concluded to abandon their purpose and return home to San Francisco.

In the spring of 1854, a year or two after this expedition, Mr. Lund joined one of the largest commercial houses in San Francisco, Cross & Co., the head office of which was in Glasgow, Scotland, with a branch in Valparaiso, Chile. In this establishment he started as a junior clerk, but being a man of rare business genius he was rapidly advanced and finally became part manager. He remained with this firm twelve years. Such confidence his seniors in business had placed in Mr. Lund that they sent him to Europe on behalf of the firm. In 1865, the celebrated exposition year of Paris, Mr. Lund, together with his wife, made another trip to Europe. In 1866, he established his own business of general shipping and commission under the name of Henry Lund, which was later changed to Henry Lund & Co. This necessitated another trip to Europe in order to establish his business connections in the commercial centers there. This time he visited all the large cities of the old world, spending a period of half a year. In the year 1872 the famous exposition at Vienna took place. Mr. Henry Lund again visited Europe, this time looking both for business and pleasure. Besides visiting the exposition he also traveled extensively and returned with a two-and-a-half-year-old boy, son of Mrs. Lund's sister. Later the consul and his wife adopted this boy, both his parents being dead. In 1881 Mrs. Henry Lund visited Europe with a view to arranging for the education of their adopted son, Henry Lund, Jr. The consul and his wife had in mind to give the young lad the best education possible, so they decided to place him in the universities of France and Germany, respectively. In December of the same year the consul started on a journey to join his family, but this time turning his course westward. The plan of his itinerary was to tour Japan, China, India, Egypt, Italy and to meet his dear wife and son at Niece, near Genoa. This plan was happily realized. In the spring of the following year the consul and his wife went to Norway, leaving their son in school at Paris. After some lapse of time the Lunds were on their way back to America. En route the consul established a branch of his business at Liverpool, England. In August, 1883, the happy family was again lodged in their home city, San Francisco.

Consul Lund is a true type of the Viking race. The Viking nature exerted itself in him in his early boyhood days. He was not satisfied to remain at home, he had to get out into the world. Like the Vikings of old his spirit soared far beyond the confines of the native land and home. The words of Bjoernson in his famous ''Arne' Song'' may strikingly be applied in the case of young Henry wistfully beholding the rugged nature round about him while roaming among cliffs and fjords in his native land:

> ''Shall I the journey never take
> Over the lofty mountains;
> Must my poor thoughts on this rock-wall break?
> Must it a dread, ice-bound prison make,
> Closing at last all round me,
> 'Till for my tomb it surround me?
> One day, I know, I shall wander far
> Over the lofty mountains!''

And the day came when young Lund was permitted to wander far over the lofty mountains. He has visited well-nigh all parts of the world and on his travels he took sufficient time to see all that is worth seeing. The fact that the consul speaks five different languages made his travels in foreign lands so much more pleasant and profitable.

In the spring of 1884 he became acting consul at this port for the kingdom of Sweden and Norway. April 4, of the following year it pleased his Majesty, King Oscar, to appoint him consul of California, Oregon, Washington and Alaska. Mr. Henry Lund showed great executive ability in his management of the consulate locally and in the organization of the consular district of the Pacific states. He had five vice-consuls under him: Port Townsend, San Pedro, San Diego, Portland and Seattle. The wisdom and efficiency of Mr. Lund as a consul is generally conceded. Fittingly, too, his efficient service was recognized by the countries he represented. In 1892 it pleased his Majesty to create him a Knight of the Order of Vasa—first class. In 1899 more honors were bestowed upon Consul Lund, when his Majesty, King Oscar, conferred upon him the Order of St. Olaf—first class. When in the year 1905 Norway and Sweden were separated, Mr. Lund was appointed consul of Norway, and in the year 1907 King Haakon VII created him commander of St. Olaf, second class, and in 1915 of the first class, the highest honor in the gift of the king. At five different times, when in Europe, he was granted audience by King Oscar who, to show his regard for him, sent him his portrait with his autograph on it. King Haakon received him in audience once in Christiania and another time in Paris. At Baden Baden the Crown Prince of Sweden and Norway, now King of Sweden, gave him an audience.

Many years had now passed by and left Consul Lund aged and gray in the service. He felt that he no longer could carry the onerous burden of responsibility and work in connection with the consulate. He apprised the home government of his intention to resign, from which they endeavored to persuade him, but it was the resolute purpose of Consul Lund to become released from his consular duties. So his wishes were granted in the form of an honorable discharge.

The Scandinavian Benevolent Society of San Francisco was organized in 1859. The committee to arrange for the organization consisted of three Norwegians, three Swedes and three Danes. It is one of the oldest Scandinavian societies in America and the oldest one west of Philadelphia and New York. This society has been instrumental in doing much good, helping the sick and the stranded, cheering the hapless widow and the destitute orphan, and serving as a haven for homeless sons and daughters of Scandinavian descent. Consul Lund was one of the originators of the thought to form such a society and he became one of the most enthusiastic and self-sacrificing workers in the effort of realizing its purpose. Consul Lund is now the only surviving member of the original committee. February 28, 1909, the society celebrated its fiftieth anniversary. On that occasion the Scandinavians of this community gave expression to the high esteem in which Consul Lund is held by creating him the honorary president of the society.

A monument to the honor of Consul Lund may be seen in Golden Gate Park of San Francisco in the form of the brig *Gjöa.* Captain Roald Amundsen on his return from the discovery of the Northwest Passage, where he named a very prominent point ''Cape Henry Lund,'' left *Gjöa* at Mare Island. His intention was to use her on his next expedition. In the meanwhile he was accorded the use of the brig *Fram.* The captain then decided to sell *Gjöa* as a means of raising money for his proposed expedition. He requested Consul Lund to sell *Gjöa* for him. A patriotic thought arose in the consul's mind, ''Not to sell *Gjöa,* but to place it in some prominent place as a memorial of the discovery of the Northwest Passage.'' Golden Gate Park was the place thought of by the consul. But Captain Amundsen needed funds. The consul made an appeal to the Norwegian-Americans in behalf of this project, his plan being to pay a certain sum for *Gjöa* and then leave it in said park. Thus he hoped to help the famous explorer. As for his appeal for aid made to Norwegian-Americans, with one notable exception, it was fruitful in disappointment. Only a few responded, so many seeming to have more than enough with their own local affairs. But Mr. Lund did not give up his plan and successfully he carried it out. The project cost several thousand dollars before the ship was safely lodged in the park. Our worthy patriot procured the funds. About $1,500 came from his countrymen in answer to his appeal for aid. This money he handed over to Roald Amundsen. The *Gjöa* was presented to the city of San Francisco and now she stands there as a fitting memorial of the discovery by a Norwegian of the Northwest Passage and as a monument to our patriotic Norwegian consul, Henry Lund.

In 1914 he resigned from the consulate of Norway after thirty years of faithful and efficient service. In 1915 he retired from business, leaving it in charge of his adopted son, Henry Lund, Jr., who had been in his office twenty-six years, the last ten as junior partner. For a period of fifty years Consul Lund had been the active head of one of the leading shipping and commission houses on the Pacific Coast.

Consul Lund is a public-spirited man, a man who has ever been a potent factor in movements looking to the uplift of society and to the amelioration of human sufferings. Being a man of means, he has been in position to carry out the promptings of his noble heart. Thus institutions of charity and of church, as well as organizations looking to civic betterment, have all found a friend and supporter in Consul Lund. The number of ''landsmaend'' coming to Lund in his official capacity as consul, soliciting help of diversified nature and always getting it, may well be said to be beyond computation. Therefore Consul Lund has won for himself a secure place in this community where he has lived and labored so long. His generous heart and his integrity of purpose have gotten him the love and esteem of all. Consul Lund, however, met many a detractor on the rugged road of life. A person in public work must expect that. But how true in Lund's case these famous words, ''It were a pity for good men to be without detractors, seeing that virtue shines the better for the foil of slander.''

Consul Lund never became a naturalized American citizen. This was due to no spirit of neglect on his part, or lack of patriotism. No native born American ever loved America and American institutions better than Consul Lund. But he deemed it best to retain his Norwegian citizenship as long as he was acting in the capacity of Norwegian consul, thinking thereby to be in position to do more for the conservation of his people's interest at home and abroad. And he was also conscious of the fact that the best service by him as consul was the best gift he could give to the country in which he lived. He knew that so much, but nothing more, was required of him as a citizen.

Another incident may be mentioned in this connection—and it is a touching one. It shows what manner of man Consul Lund is. In his declining years he has not been oblivious of the end fast approaching, when he shall be summoned to join the host of the City of The Dead. So he has provided a quaint mausoleum now erected at Cypress Lawn Cemetery, made on Norwegian soil by Norwegian hands and out of Norwegian material—genuine Norwegian granite. There he will rest under Norwegian roof on American soil, reminding every passer-by never to forget their mother country, however small and insignificant it may be.

On March 5, 1864, he was married to Anna Maria Herkenhoener, an amiable lady of German descent. On March 5, 1914, the venerable couple celebrated their golden wedding anniversary. The festivities took place at their handsome mansion in Jackson Street. Many dear old friends remembered them on that day, sending greetings and felicitations. The messenger boys were busy carrying telegrams of congratulation from the various parts of the social and commercial centers of Europe and America, and especially from the kingdom of Norway. Consul and Mrs. Lund are generally loved and respected by all who have had the good fortune to know them. In these many years their home has been a center of many a social function. May Providence give them many days yet to enjoy the blessings of their comfortable home and good-will emanating from the loving associations of their countless friends!

CONSUL H. H. BIRKHOLM

Consul Birkholm was born at Ärösköving, Denmark, September 23, 1847. He was educated in the schools of his home town. His desire was to become a sailor, and according to his purpose, he went to sea as a very young man. This gave him an opportunity to visit the various seaports of the world and study human society from many angles—in itself an education coveted by many but granted only to a few. The mate's examination he successfully passed in Denmark. In 1869 he left the mother country, his point of destination being San Francisco, California. Consul Birkholm possessed a personality fruitful in making friends. As one of his dearest friends he always referred to Consul J. Simpson, whose successor to the consulate of Denmark he eventually became. For many years Captain Birkholm was engaged in coastwise trade on the Pacific Coast. In 1879 he decided temporarily to give up the seafaring life and to make a trip to the old country. This visit was destined to become one of the happiest incidents of the Captain's life. In visiting friends and relatives at home he met his childhood sweetheart and schoolmate, Marie Bertha Caroline Brandt, who consented to become his wife and helpmate in life. The Reverend Jacob Paulli was the officiating pastor at the wedding. The Captain and Mrs. Birkholm have been blessed with two children—Harry Hansen and Charles Marius. On his return to San Francisco Captain Birkholm again went to sea and in the course of years he became known as one of the most capable and successful skippers of the West Coast. In 1886 he gave up the seafaring life for good and entered the hotel business in San Francisco, establishing a firm under the name of Yosemite House. In all his undertakings, whether on land or sea, the Captain was always successful. Yosemite House soon assumed the reputation of being one of the centers of the hotel world in San Francisco. In 1906, the well-known Yosemite House was destroyed in the conflagration that laid low the major portion of our city. The six years following the Captain devoted his entire time to the business of the Danish Consulate which position of trust he had held since May 9, 1898. In the year 1904, Christian IX, King of Denmark, honored him with the Cross of Dannebrog. In 1910 he resigned as Danish Consul. His many years of strenuous life had left their impress upon his sturdy form, and the Captain began to fail in health. In 1912 he departed this life, leaving an afflicted widow and two children. On January 7, 1912, his remains were laid at rest at Mount Olivet Cemetery.

CONSUL H. H. BIRKHOLM

In the death of Captain Birkholm the community of this city and State has sustained a great loss. Captain Birkholm was one of the good old pioneers whose share in the shaping and upbuilding of our social organism will ever be cherished in veneration and grateful memory. As a business man and friend and neighbor he was universally loved and respected. An acute sense of justice coupled with unassuming dignity, exceptional amiableness and an untiring spirit of self-sacrifice were the leading characteristics of his personality. His death was lamented by all who had the good-fortune to know him, but especially by the poor and needy of our community. The Captain would let all else go—home comfort, business, pleasure—if only he could be of some help to others. Nor did he lack opportunity. Widows and orphans, and aged, destitute and stranded and down-and-outs knew the way to the Birkholm home. Nor was ever anyone in real need disappointed—the door to the Captain's heart was as accessible as the door of his home. It is said of a man in the times of old that "He was eyes to the blind, feet was he to the lame, and father to the poor." How happy he whose life reflects, if only in a small degree, the truth of these words. Captain Birkholm felt this happiness of life, for he had been given grace to live the truth of these words.

JAFET LINDEBERG

Mr. Lindeberg was born at Tronsö, Norway. His parents were not people of means and so the young lad was raised amid frugal surroundings. After leaving the native country as a poor sailor the story of Lindeberg's life sounds like a romance.

In the spring of 1898 he emigrated to America, his objective point being Port Clarence, Alaska. He had joined an expedition conducted by Dr. Sheldon Jackson, on behalf of the United States Government, for the relief of the imperiled miners reported to be dying from starvation in the American Klondyke country. Dr. Jackson had bought several hundreds of reindeer in Lapland and gathered together a great number of reindeer drivers, who, with their families, agreed to remain in Alaska to teach the Eskimos the industry of raising reindeer. Mr. Lindeberg entered the employ of Dr. Jackson as interpreter and superintendent of these families. In the month of February the expedition reached Port Clarence harbor. Shortly after his arrival there Mr. Lindeberg was requested to go to Siberia to purchase reindeer for the Government project in Alaska. He declined the offer—Dame Rumor had told him of gold discoveries in the vicinity of Golofnin Bay. Being duly released from Dr. Jackson's employ he proceeded to Council City. There he met Brynteson and Lindeblom, natives of Sweden, who, together with him, were destined to play a prominent rôle in the world of finance. These three men formed what was termed a prospecting companionship. Having explored without success the region round about Council City they returned to Golofnin Bay and in a boat proceeded along the coast to the mouth of Snake River and up this river to a tributary now called Anvil Creek. Here on September 22, 1898, these three inexperienced prospectors made a discovery of gold which made that part of the country famous throughout the world. This was the first discovery in that district followed up by location leading to results. The association of these three prospectors afterwards became known as the "Pioneer Mining Company," of which Mr. Lindeberg is the president.

JAFET LINDEBERG

In the course of the winter the report of this rich gold discovery at Nome reached the outside world, and when spring came the stream of argonauts began pouring in. The following year, after the thawing of ice and snow, the gold-seekers continued to come, and not less than a hundred steamers and sailing vessels were lying in the open roadstead outside of Nome. Many Scandinavians were in the number and many of them, too, made good in the mines, accumulating considerable wealth. No one, however, created for himself a fortune and position like that of Jafet Lindeberg. He became a millionaire before the end of the year. The Pioneer Mining Company, which was organized in 1900, is the most extensive and powerful association of its kind on the Seward Peninsula. Lots of other mining companies have been organized under the direction of prominent American business men, but most of them have gone bankrupt or ended as subsidiaries of Mr. Lindeberg's company, now practically in control of the mining industry in the Nome region of Alaska.

But Mr. Lindeberg was destined to render a far greater service to Alaska than only to become a successful mining operator and chieftain in the development of her resources. When the news of the great discovery reached the outside world, prospectors and others in the spring of 1899 made a rush for the new gold field from Dawson and the upper Yukon and from the Pacific Coast, but upon arriving at Nome they found themselves forestalled by locations covering the whole valley of Anvil Creek. The newcomers were naturally disappointed and gradually worked themselves up to exasperation over the situation, the alleged point in their favor being that alien prospectors had covered the whole creek and its benches and other creeks and benches in that neighborhood with their locations, and they contended that no alien had a legal right to locate a mining claim on the American public domain.

These objections to the original prior locations on Anvil Creek made by Lindeberg and his companions had no foundation in law or fact. For, in the first place, it was decided by act of Congress, that the general laws of the state of Oregon then in force were declared to be the laws of the district of Alaska. These laws provided that, "Any alien may acquire and hold lands . . . by purchase, devise or descent and he may convey, mortgage and devise the same and if he shall die the same shall descend to his heirs." In the second place, Messrs. Brynteson and Lindeblom were naturalized American citizens, and in the summer, previous to the discovery on Anvil Creek, Lindeberg had declared his intention to become a citizen of the United States.

However dramatic and interesting in detail the story of this controversy, the writer must refrain from dwelling on more than a couple of salient points amply illustrating the services of Mr. Lindeberg to his fellow-citizens in Alaska.

On June 5, 1899, nine months after the discovery location by Mr. Lindeberg, a certain gentleman in the Nome District claimed to have located the same ground, In other words, he "jumped" the claim. Subsequently it appeared, that this gentleman had made the location over the prior location, because he understood that Brynteson, Lindeblom and Lindeberg were aliens and that the ground was therefore open to occupation by a citizen of the United States. He therefore brought suit against the original locators and placed the claim in the hands of a receiver.

Now all the mining property of Anvil Creek and vicinity became the storm-center of one of the most bitter controversies ever waged in the regions of distant Alaska. The controversy was even transferred to Washington in an effort to invalidate these original locations by congressional legislation. But to make a long story short, it ended in a glorious victory for our fellow-countryman, Mr. Lindeberg, and our cousins from beyond Kjölen. Congress passed a bill preserving the rights of aliens under the statutes and decisions of the courts as fully as legislation could accomplish that purpose by express affirmative action. And that is the law on the subject today. The bill furthermore provided a civil government for Alaska, which was approved June 6, 1900. It established a district court for the District of Alaska and provided for the appointment of three judges for the district, which appointments were made at once.

Now the celebrated case was taken to the courts of Alaska. But mighty and corrupt influences were brought to bear against the defendants. The newly-appointed judge was in league with the looters. In Alaska justice could not be had, so petitions for appeals were forwarded to the Circuit Court of Appeal at San Francisco and the case was concluded with signal victory for the defendants and for law and order and justice in the new District of Alaska. The offenders and law breakers were sent to jail and the unrighteous judge deposed.

The services of our countryman, Mr. Lindeberg, rendered by the successful conclusion of this controversy, can not be measured according to arithmetical calculations. His contribution toward the establishment of law and order in that land of which the writer says, "There is never a law of God or man that runs north of Fifty-three," is worth more than the untold millions of precious gold resting under the masses of ice and snow in those regions of lurid fame. On this very point the celebrated California jurist, William W. Morrow, before whom the case was tried, says, "The situation at Nome during these proceedings in the year of 1900 was represented as being deplorable in the extreme. No one cared to develop a mining claim or to make any effort in that direction, for, if it proved valuable, it would probably be 'jumped' upon some pretension or other, suit brought, and claim placed in the hands of a receiver. There was no incentive to enterprise while this judicial menace was suspended over the community.

"In the fall of 1901 . . . the Attorney-General designated Judge Wickersham of the third division to hold a term of court at Nome. Upon his arrival at that place . . . the supremacy of law was established. The usual result followed. Business and mining enterprises were restored to their proper channels and the community proceeded to take such advantage of the wonderful resources of the locality as to make it one of the greatest mining camps in the world. . . . For the vast territory of Alaska as a whole, and for that part of it involved in this discussion in particular, we say the law is supreme, and is being administered by its judiciary with as much wisdom and efficiency as any other part of the United States. . . . It is being made the home of an industrious, law-abiding and prosperous people."

All honor to Mr. Lindeberg, who became a chosen instrument to effect this social reform in the lawless mining camps of Alaska. His services are well known to the outside world. Due credit is also given him by the people in Alaska. At Nome, while being the king of the argonauts, he is hailed as the liberator from the clutches of greed and lawlessness and the establisher of equity, law and order.

As a business man Mr. Lindeberg is in possession of sound judgment, of unusual sagacity and grasp and of great adaptability in creating and developing original fields of business and opportunities. Besides being the president of the Pioneer Mining Company of Nome he is engaged in several other extensive business enterprises, notably banking institutions in the large cities on the Pacific Coast.

But Mr. Lindeberg has other interests at heart than only those of a purely commercial nature. He does not suffer himself to be enwrapped, body and soul, in material things. It is indeed bracing to return from an interview with Mr. Lindeberg. His conversation is always of a constructive nature. He loves to speak about art and education and social conditions and how a furtherance of these may be effected.

His services rendered in connection with Norway's participation in the Panama-Pacific International Exposition are well known. Besides munificently contributing to that cause, to him belongs the honor of inducing the artists of the Kingdom of Norway to exhibit Norwegian art at the late world's fair. As the president of the art committee he took charge of that department and concluded his work in a manner most creditable to Norway and the Norwegian people at large.

The interest taken by Mr. Lindeberg in matters of education is also pronounced. There is particularly one of our Lutheran colleges on the Pacific Coast that has received the benefit of Mr. Lindeberg's attention. For years he has admired the work of this institution. And it was indeed gratifying news, when the report came that Mr. Lindeberg had presented Pacific Lutheran Academy of Parkland, Washington, with the moving-picture machine, together with all the films, used at the Norwegian pavilion during the Exposition in showing the world the nature, the sports, the industrial and social life of Norway. The significance of this gift as a factor in the education of the many young boys and girls who, in the course of time will study at that institution, is self-evident.

Mr. Lindeberg is a Lutheran by birth and education, nor has he forgotten his Lutheran church. The significant deed in behalf of our Lutheran academy at Parkland may be mentioned as one of the evidences of this fact.

''Norway is a poor country,'' thus saith the writer. In one sense it may be the truth. Materially Norway is poor. And because she is poor many of her sons and daughters have chosen to leave her, and in leaving they wended their way to this western world, and here they have built their homes and founded their fortunes. But the poverty of Norway is only a material poverty; intellectually and spiritually, she possesses a wealth second to that of none of the great sister nations whose domains are skirted by the same seas. This wealth is fittingly called ''The heritage of our fathers.'' And this wealth the many hundreds of thousands of emigrating sons and daughters took with them and transplanted on the soil in this new country of their adoption. And as a result of this transplanting our people are now a highly esteemed and respected part in the structure of this great American nation. Their contribution in the upbuilding of this country may well be termed an integral factor. In fulfilling the duties of American citizenship they have endeavored to give the best there is in them. Our Norwegian-Americans today are therefore occupying leading positions of trust and responsibility in the world of industry, education, politics and finance. As one of the foremost among them our worthy countryman, Mr. Lindeberg, may be numbered.

ANDREAS BJÖLSTAD

Mr. Bjölstad was born in Fredriksstad, Norway, September 26, 1864. His parents' names were Andreas Bjölstad and Inger Marie Bjölstad (née Berggrav). He was educated in the state schools of his native town. In 1885 he emigrated to America, his point of destination being San Francisco. After various employments he entered the service of the Southern Pacific Railroad Company as clerk in the general freight office and remained there until 1893, when he secured a position as bookkeeper and cashier with the Henry Lund & Co. In one capacity or another he has served Mr. Lund until the present day. In presenting this little sketch of Mr. Bjölstad, no more fitting words can be found than those of Consul Lund from an interview with him only a few days ago. ''I understand,'' said the Consul, ''that Mr. Bjölstad came here in 1885. When in the early nineties I first met him, he was employed in the office of the Southern Pacific Railroad Company. I arranged with him to give my young son evening lessons in the Norwegian language, whereby I learned to know him very favorably. In 1893, finding that I needed someone in my business office who could speak and write the Norwegian language, I offered Mr. Bjölstad the position of bookkeeper and cashier. This he accepted and filled to my entire satisfaction. Four years later, when there became a vacancy in the secretaryship of my consulate, I offered him that position, in which he continued for about seventeen years. And here let me add, he has fulfilled his duties to my utmost satisfaction. During these many years I have had no occasion to find fault with him. He has cared for everything relating to the office with punctilious faithfulness, relieving me of much trouble. Therefore, three years ago, when I went to Europe, staying there for several months, I appointed him acting consul during my absence, and also got him to care for my personal affairs. When I returned I found everything cared for in detail. In 1914 when I sent in my resignation as consul I enclosed a special request to my government that Mr. Bjölstad be installed as acting consul until such time as my successor should be duly selected. This appointment the government made,—however, on the condition that the claims to the paid consulate remain open, if the government decided to make such change in San Francisco. When the change was made and Mr. Bjölstad, notwithstanding, applied for the position, it afforded me great pleasure to recommend him. But as I feared, so it came to pass. Out of the seventeen applicants, one nearer to promotion and home was selected. However, I trust that Mr. Bjölstad, under the new consul, will continue to serve his government and his countrymen on this coast, and serve them as ably and faithfully as he has done hitherto.''

ACTING CONSUL ANDREAS BJÖLSTAD

On June 8, 1898, Mr. Bjölstad was married to Anna Marie Blomquist. One child has been born to them, and they reside at their comfortable home in Seventeenth Street of this city.

A better characterization of the man, Bjölstad, than that emanating from the venerable Consul Lund can not be given. The writer only desires to add that the sentiments expressed by him are the sentiments of our entire Norwegian community. Mr. Bjölstad is a man whom we all respect, a man whose services to his countrymen, in the home-land and in this land of their adoption, will ever be cherished in grateful memory. And finally be it also said that no news would have been more welcome and gratifying to the Norwegians here than to learn that Mr. Bjölstad had been honored with the appointment of Norwegian consul at San Francisco.

CAPTAIN CHARLES NELSON

Captain Nelson, who left an impress on the lumber, shipping, financial and commercial world of San Francisco that will live for years, was a native of Denmark and was born in a family who had resided in the same place for numberless generations. On September 15, 1830, when only thirteen years old, he left home and went to sea, his first remuneration being only 75 cents per month. He rose step by step until he became first mate. Arriving in San Francisco in July 1850, he determined to leave the sea and to turn to mining. He was only moderately successful in this venture and so went back to his old love, and with a comrade secured a whaling boat which they rowed between Sacramento and Marysville, carrying freight and passengers. In 1862, in connection with John Kantfield he became interested in a barkentine, the first one built on the Coast, and later became part owner of a larger vessel in San Francisco.

CAPTAIN CHARLES NELSON

In 1867 he made his first venture in the lumber business, buying an interest in the Kimphill Lumber Company which owned large sections of timber land in Humboldt County, California. From this beginning grew the large lumber and shipping business which was controlled by the Charles Nelson Company, organized by the Captain to handle his extended and varied interests and investments.

Captain Nelson's first wife was Miss Metha Clausen, a native of Denmark, to whom he was married on October 13, 1856. Only one child, a daughter, the wife of Eugene A. Breese of San Francisco, survives. Mrs. Nelson died in 1896, and in 1901 he was again married, this time to Miss Helen Stend, also a native of Denmark. She survives her esteemed and loved husband.

Charles A. Nelson was for four years the honored president of the Chamber of Commerce of San Francisco. He was also a trustee of Mills College. In his almost sixty years of residence in California he won a host of friends on account of his unswerving devotion to duty and honesty of purpose, and all who knew him admired him for his pleasing personality.

The Captain was one of the organizers of Our Savior's Scandinavian Evangelical Lutheran Church of San Francisco. He was intensely interested in the propagation of the Christian faith. He donated large sums of money to the missions, home and foreign, to church building projects, to orphan asylums, to homes for the aged, and to educational institutions. Trinity English Evangelical Lutheran Church will always gratefully remember Captain Nelson for his substantial assistance toward the financial rehabilitation of the congregation after the great disaster to our city in 1906.

Captain Nelson died June 5, 1909, universally regretted by all who had the good fortune to know him in life.

AXEL WARENSKJOLD

Mr. Warenskjold was born in Haugesund, Norway, August 20, 1867. His parents were Hans Warenskjold and Ingrid Henrietta. He received a liberal education in the home country, first going through the common schools, and then he entered a private school at Grimstad, and later on he finished his education at a technical and commercial college in the city of Trondhjem. In August, 1883, he entered upon the journey to America, the objective point being Philadelphia. In the fall of the same year he started to learn the machinery and millwright business at Neenah, Wisconsin. Later he moved to Chicago, where he finished his education as a machinist. In 1886 he moved to San Francisco and obtained a position as a master mechanic in the California Wire Works.

AXEL WARENSKJOLD

Mr. Warenskjold is by nature endowed with many gifts. Pre-eminently he possesses a mechanical and constructive mind, coupled with an exceptional administrative ability. It was therefore natural that Mr. Warenskjold should soon begin to pick his own way in the industrial world. In 1887 he moved to San Diego and shortly after he was at the head of a concern of his own. Only a few years, however, did he stay in the southern part of the State. After a temporary residence in Mexico, he returned to San Francisco. Here he accepted a position as assistant superintendent of the Hercules Gas Engine Works. This position he held until January 1, 1905, when he established the Atlas Gas Engine Company. This business venture proved to be a great success, but in 1906 the whole plant was reduced to ashes, and Mr. Warenskjold's extensive business went down in the general crash of the city.

Mr. Warenskjold found himself in the company of a great number of our enterprising and successful business men of San Francisco, who were completely paralyzed financially. But he did not despair of the situation. With fresh courage he threw himself and his mighty energies into the work of rehabilitating his ruined fortune.

''Honesty is the best policy'' has been the lodestar in Mr. Warenskjold's career, both before and after his entrance into the commercial world. Than after the destruction of San Francisco he never more fully experienced how well it pays to have lived the principle involved in these words, ''Honesty is the best policy.'' In those momentous days it devolved upon Mr. Warenskjold to start anew the Atlas Gas Engine Company. With two empty hands he undertook the task. He found the banks willing to loan him the necessary capital, but the only security he could give was his name. However, that was enough. Mr. Warenskjold secured the desired funds and began all over again. Now he established his plant across the bay, at the foot of Twenty-second Avenue, Oakland. How well he has succeeded the following facts will bear out: Under normal conditions his firm now employs 110 men. The annual volume of business is approximately $425,000. The new plant covers two acres of land, including a wharf extending to the deep water channel. The plant comprises machine shop, pattern shop, and forge shop. The different departments are equipped with the latest and most up-to-date machines, about one hundred in number.

The Atlas Gas Engine Company has branch agencies in Seattle, Washington; Astoria, Oregon; San Pedro, Stockton, Sacramento, California; Sydney, Australia; Shanghai, China, and New Orleans, Louisiana.

The key to the success of Mr. Warenskjold as president of the Atlas Gas Engine Company is his exceptional ability to handle his employees. Good pay, sanitation, convenience and fairness are factors never lost sight of in all Mr. Warenskjold's dealings with his workmen. One of his main endeavors is to satisfy the laborer. The Atlas Gas Engine Company represents an investment of approximately $300,000.

April 9, 1889, Mr. Warenskjold was married to Helen Frances Milton. Four children have been born to them, Hans Frederick, William Earl, Olive and Theos, the last deceased. They reside at their comfortable home in East Sixteenth Street, Oakland.

There are many prominent men among the Norwegians in America, men who have made a mark in the province of Church and State, in the world of letters, science, industry and finance. Among these men Mr. Warenskjold holds an honorable place as a real captain of industry and finance.

JAMES A. SORENSEN

One of the many enterprising business men of San Francisco who are ever ready to help in promoting the material prosperity of our city is James A. Sorensen, president and treasurer of the Sorensen Company, jewelers and opticians, whose place of business is in Market Street near Third.

JAMES A. SORENSEN

Mr. Sorensen is of Danish parentage, but was born at Viesby, Province of Schleswig, Germany May 22, 1873. Was educated in the schools of his native town. At the age of fifteen emigrated to the United States. With the youthful aspiration of becoming a success in life, he came to this new country of his adoption. In the year 1886 he arrived in San Francisco. The first year was spent in studying the English language. The year 1899 may be designated as the turning-point in his career. Then he began to learn the jewelry business—the business which he chose as his life-work, and in which he has succeeded so marvelously well. Nearly every great undertaking has had a small beginning, nor is Sorensen's successful business venture an exception to this rule. From a little hole in the wall of a south of Market Street shack his business has grown in volume and proportion now second to none in San Francisco. In 1906 when the city was destroyed by fire, Sorensen's business went down in the general crash. Those were trying days,—days for purging the souls of men and for bringing to light every one who was ready and willing to dare and do. Mr. Sorensen, undaunted by misfortune, buckled on his armor and plunged into the fight to do his share in rehabilitating the business of our city in ruins. How well he succeeded, the following facts, better than words, may tell. Ten days after the fire he was running a flourishing business in Mission Street near Twenty-second, and another in Fulton Street near Divisadero, and three months after the fire he operated a third store on a large scale in Market Street near Third. When he began to dig in the ruins of Market Street and to clear away the ashes so as to make room for a temporary shack, his friends thought him beside himself, for the town round about, four square miles, was a wilderness of ruins, fit as habitation only for bats and owls. Now, however, Mr. Sorensen's friends readily concede the good judgment exercised by him, when on that eventful morning he decided to begin to haul debris from his present site in Market Street. And we need not wonder at this concession, now so freely given, for Mr. Sorensen is occupying today the whole capacity, downstairs and upstairs, including a mezzanine floor, of a massive steel and concrete structure, 50 by 200 feet, located in the heart of our metropolis, contiguous to the newspaper triangle, where the seething masses of people, like a surging ocean, continue from morning till night, with a volume of business far exceeding the most sanguine expectations.

Mr. Sorensen never aspired to public office but he is ever ready to aid in civic affairs and to work for the uplift of the community and to assist in every good movement in behalf of church, municipality and state. Mr. Sorensen married Miss Christine Hansen, a native daughter of California and of Danish descent. Two children are born to them, a boy and a girl, Leslie Knudsen and Thyra Christine. The Sorensens occupy a comfortable home in Fulton Street, San Francisco, and are loved and respected by a host of admiring friends. Personally, the compiler of this volume owes Mr. Sorensen no small debt of gratitude for his invaluable services in the arduous work connected with the publication of this book.

HENRY HORSTMANN

A better character-sketch of Mr. Henry Horstmann than the one found in a local German weekly shortly after his death can hardly be given. We therefore take the privilege of presenting it to our readers in a free translation:

"The days of our years are three score and ten; and if, by reason of strength, they be four score years, yet is their strength, labor and sorrow; for it is soon cut off, and we fly away." This word of Scripture may be applied to the good citizen and old settler of California, and especially of San Francisco, Mr. Henry Horstmann. We believe that all our readers, especially the older ones, knew this good man, and knew him as one whose heart was ever open and ready to espouse a good cause, and as one who in all respects was a valuable member of the community. Nevertheless we are constrained to pay a tribute of respect to our departed friend, not that we thereby pretend to erect a memorial to Mr. Horstmann—this he has done himself by his noble life—we only beg leave to contribute a wreath of honor to his memory. It is always profitable for the members of the younger generation to learn of the good things accomplished by the noble and true of the preceding generation. The saying of Antonius is true in too many instances: "The evil that men do lives after them; the good is oft interred with their bones."

HENRY HORSTMANN

Regarding the earlier years of Henry Horstmann's life there is but little to relate, because we have not been able to secure the facts pertaining to that period of his career. He was born at Harpstedt, Hanover, 77 years, 4 months and 17 days ago. He was educated in the state schools of his native city. He was of a mechanical bent of mind and in the course of years became a very efficient carpenter. In the year 1848 he emigrated to America, arriving at New Orleans where he worked at his trade. In the fall of the same year he was married. His wife, Mrs. Marie Horstmann, died before him, as also his adopted son, Henry F. Horstmann. The nearest relative now surviving him is his sister, the amiable Mrs. John Bach.

In the year 1849 he moved to Panama. Immediately upon his arrival, there broke out a devastating epidemic, filling the community with misery and tumbling its victims by the thousands into the grave. Mr. Horstmann stepped into the breach, throwing himself with his whole soul into the strenuous work against the ravages of the fell disease, nursing the sick and making coffins for the dead. Finally he was taken sick himself. His wife was left behind in New Orleans, so he was alone and homeless, a stranger in a strange land. Those were trying days.

During his illness he was nursed by a kind negro woman. His time of departure had not yet come, and he regained his health. The epidemic had been checked, and now he took a hold of his old profession. Working industriously, he saved up enough means to undertake the journey to San Francisco, arriving here in the year 1850, his good wife following not long after. In the years 1851 and 1852 Mr. and Mrs. Horstmann were running a hotel at Marysville. Then they moved back to San Francisco, and Mr. Horstmann started a business in movable houses, bringing them here from Sweden and Denmark, ready made for putting up. This was a new departure in those days and became one of the most interesting newspaper topics throughout the entire country. It was commented on as one of the cleverest enterprises ever undertaken in the California business world. In Dupont Street he established a furniture store, but the first year it burned to the ground. It is interesting to note that this store occupied the present site of the old St. Mary's Catholic Church. But only a few days after the store had been destroyed, Mr. Horstmann was doing business at the same place. His energy and courage had no bounds. At a later date he associated himself with Mr. Fritz Hufschmidt and started a furniture store near Portsmouth Square. A few years thereafter they built an imposing stone structure in Pine Street, between Montgomery and Sansome, into which they moved their business. In the sixties they moved to the site now occupied by St. Nicolaus Hotel.

A man with the qualifications of Mr. Horstmann could not help but become a man of great wealth. In his declining years he retired from his furniture business, but to his death, he continued as director and vice-president of the German Bank. Mr. Horstmann was intensely interested in the welfare of his city. In the year 1856 he became a member of the so-called "Vigilance Committee" and was one of the most undaunted and energetic workers. He had an amiable personality and made many friends, but his dearest and nearest friend, aside from his own family, was Mr. Fred Hesz, Sr. They were as brothers and both served in the twenty-first section of the so-called German Company under the brave Captain Meyerdierks. These two inseparable friends have shared together many of life's sorrows and joys.

And now Horstmann, this invaluable citizen is gone home. What he was to the needy who came to his home or place of business for counsel, for comfort, for help, that is something the world round about him never learned to know. Only those who became objects of his benefactions knew, and they told the story. Mr. Horstmann belonged to that class of men whose left hand never gets to know what the right hand does. Never was he known to disappoint anyone who associated with him or sought his assistance. He was ever ready with a word of cheer and a helping hand. When his testament was published, the public learned to know the movement of his charitable heart, in life ever swelling with love for those less fortunate than himself. Individuals and institutions of mercy became the objects of his charity. With him entered into the grave a noble man, a man who has done much good. To him will not apply the well-known words, "Woe unto the cup going to pieces without slacking thirst; woe unto the heart that dies without showing love."

The death of Mr. Horstmann was lamented by all who had known him—and they were many. As an evidence of the respect and love cherished for Mr. Horstmann, and the deep regret occasioned by his death, we quote a resolution emanating from his life-long business associates and friends, who together with him had established the German Savings and Loan Society of San Francisco:

"Whereas this board is advised of the death on Monday, February 20, 1905, of Henry Horstmann, one of the directors and second vice-president of this society, and the members of the board in the meeting now assembled, desire to give expression to their feelings of regret for the loss of their associate and of sympathy for his bereaved relatives; be it therefore

"Resolved, That by the death of Mr. Horstmann, who has for the past seventeen years been one of its directors and for the last three years its second vice-president, this society has lost the aid and assistance of a most earnest and conscientious officer, and that the members of this board have been parted from one whose long association with them has resulted in relations of the warmest personal friendship and respect; further

"Resolved, That the members of this board extend their heartfelt sympathy to the relatives of the deceased; and further

"Resolved, That the members of this board and the officers of this society attend the funeral in a body and that these resolutions be spread upon the regular minutes of the board, and the the secretary transmit an engrossed copy thereof to the sister of the deceased."

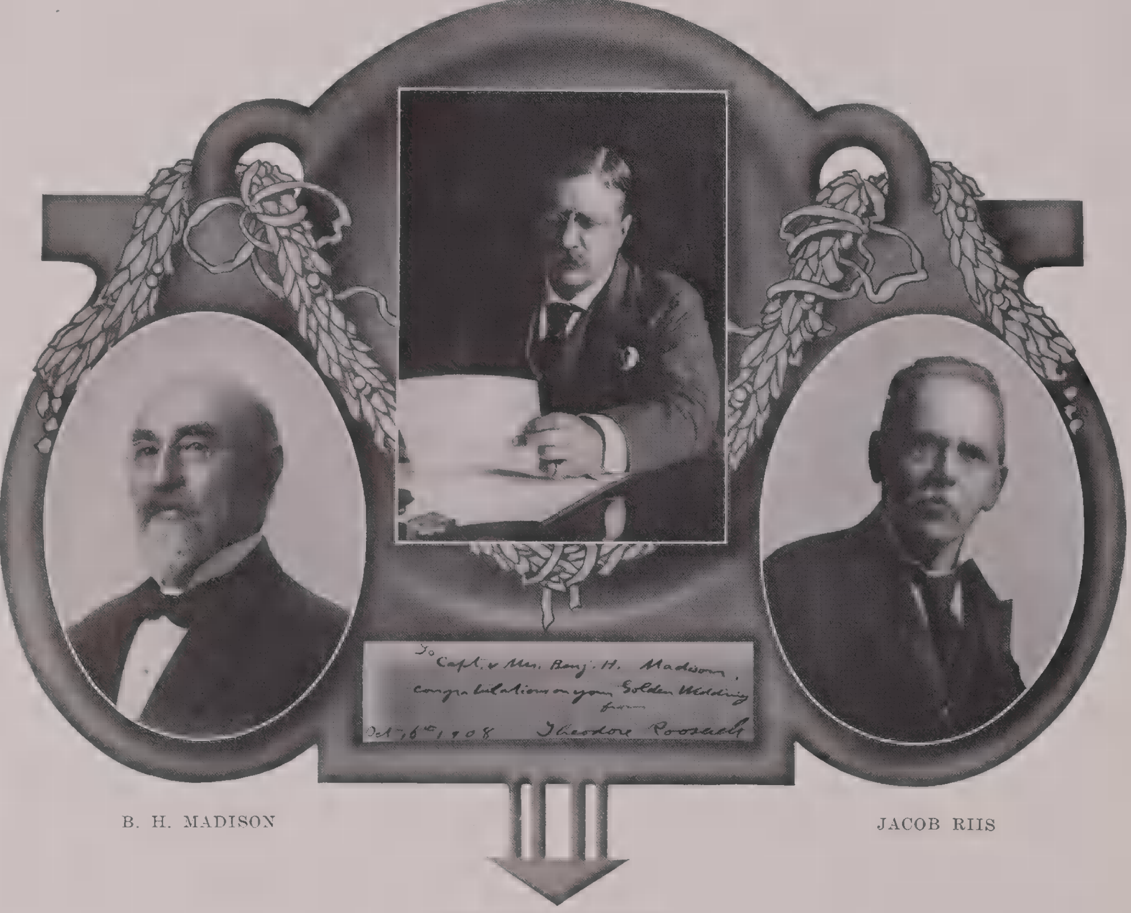
Long live the memory of Mr. Horstmann and peace be with his dust!

BENNETT H. MADISON

By JACOB RIIS

How small is this world we are accustomed to deem so vast, when we think of friends "far away!' In the spring I was born, a boy of fifteen who had lived all his childhood days in sight of the tower of the great Castle-church in my home-town, went out to sea, following the call of his people from time immemorial. He took nothing with him but a pair of strong hands, a stout heart, a clever, honest head and his widowed mother's blessings. We did not meet then, for he came back only once in the young years, and though my people's lives touched his at more than one point in the common affection I did not know even his name. More than half a century later, it was our lot to meet here on the shores of the great Western ocean and form a friendship that endured with ever-increasing warmth till his going from our mortal sight. His death, just when I was coming to visit him last spring (1911) was a hard blow to me. More than I can easily tell have I been touched by his allusions to me in terms of warm and brotherly affection. Captain Madison had many gifts, but among them all his rare gifts for friendship will be remembered longest among those who knew and loved him. And few were they who knew him and did not love him.

Bennett H. Madison was born on Jan. 5th, 1834 in that part of Denmark in which for now forty years and over the Prussian Eagle has beaten down the cross of the Dannebrog, and yet in which, neither the Danish heart nor the Danish tongue will be broken, for it is the home of that sturdy stock that wrote laws with the sword for every land its roving fleets reached a thousand years ago, and in the darkest of feudal times bent its neck under no man's yoke. Of that stock came Bennett Madison. His father had fought in the Napoleonic wars under the great emperor, and after peace had come to exhausted Europe held some small office of trust in his native town under the Danish Government. His mother helped eke out the family income by weaving the honest cloth of those days on her hand-loom in their little cottage. When Bennett was thirteen she was left a widow. Poverty seems hardest and coldest when it will not let the stricken mourn for the dead as they would, but perhaps it is then the kindest task-master though our eyes be holden. There was the bread to get for the children, and the widow, when she had laid away her dead, faced the world with undaunted courage alone. Her loom was busy long after the house slept, and it is recorded that there was not in all that country a woman held in higher regard than Bennett's mother. He went to the local school, and already before his father's death had been singled out by the Bishop as its most promising pupil. But whatever hopes for her boy may have lurked in the widow's heart, they had to stand sternly aside when, at fifteen, he must needs go forth to earn his living with his hands. His heart was set upon the sea, as was natural and right. And one spring morning the widow packed his little knapsack, kissed her boy goodbye and saw him trudge bravely along the causeway toward the town where the skipper with whom he was to sail for England, was waiting for a fair wind. She watched him from the cottage door, shading her eyes with her hand until he was out of sight; then went back to her work. What mother's prayers for her boy she wove into the web on her loom that day, and on many a day and night thereafter when the gales from the North Sea shook her little house, God knows, and He heard them.


To
Capt. & Mrs. Benj. H. Madison.
congratulations on your Golden Wedding
from
Oct. 6th 1908 Theodore Roosevelt

B. H. MADISON

JACOB RIIS

THEODORE ROOSEVELT

Often my old friend told me in the long-after years with what pride he saw her again and put into her hand twelve bright "rigsdaler," the wages of his trip, with the skipper's testimonial that he had been a good boy and would grow up a strong man and a good sailor. He had no happier recollection than that homecoming, and it was the only one. He never saw her again.

When he spoke of those days he loved to dwell on the Palm Sunday in 1849—"of blessed memory," he never failed to add—when he was confirmed in the church at Hvidding, his home, and of the service on the Tuesday following when his mother and he, the school-master, Pastor Gottlieb and his son Albert, gathered at the

Lord's table together. Albert, his playmate, was going away to the Latin School in Ribe. Bennett went to sea. When they met again they were bearded men. Ten years had passed when one day Albert Gottlieb knocked on the Madisons' door in San Francisco, a shipwrecked sailor, and was joyfully welcomed. He, too, had heard the call of his people, had left school and home to obey it and was second officer on a sailing ship when it was wrecked in the China seas. Saving nothing but life, he made his way to America and found his boyhood friend with whom he afterwards sailed before the mast.

I am setting these things down as he used to tell them to me in his "den" at home, and that was often enough, after the manner of such talks, by working backward. Then he used to chuckle over his "great peril" at the outbreak of the war with Germany in 1849. There was peasant rising against the invaders in his parish, and he said, "but for a friendly ditch and a big stretch of slippery ice upon which the enemy's cavalry could not venture, I should certainly not have been here to tell of it." For Bennett, though only fifteen, was sturdy and nearly man-grown, so he had his one blow at the traditional enemy of his country. Whether Albert was there I don't know. Most likely the old parson found means of keeping him at home, out of harm's way.

Much as he cherished old Dannebrog to the end of his days, he early found another love. It was on his first trip to England that he saw in the harbor of Hull the Stars and Stripes flying from the mast of an American ship, and he loved it at sight. "That beautiful banner of which we are all so proud" he would say with shining eyes—he never missed a chance of hoisting it, at the going and coming of friends, over his own home out at Hayward—but sometimes a twinge of bitterness crept into his voice as he added: "In those days it floated proudly from mastheads all over the world. Now it has almost disappeared from the ocean to the great sorrow and loss of many, and to the everlasting disgrace of Congress for not giving us protection against cheap labor." Captain Madison was not a man to mince words when he felt strongly on any subject.

Young Bennett's equipment, slender as it seemed to him then, no doubt, proved after all the best for life and its struggles. He had been a good son; he proved a good friend, and he who sows friendship reaps a crop of friendship and help. He told me once of his first real start in life and it is a good thing for young people to ponder upon. Out of a job, at Christmas in the year 1853, he was about the docks one afternoon in San Francisco looking for work. A howling gale was blowing from the north and the new steamer *Clinton*, afloat but not yet finished, was in imminent danger of drifting on a rocky point inside the old Cunningham Wharf. She was in charge of the engineer and fireman, the only men on board. They were battling desperately to run a line to the wharf to windward, but being only two, and not sailors, could not manage it. The idlers on the wharf laughed and enjoyed their plight. Bennett, looking on, saw and understood their peril. If the steamer struck the rocks, she might be pounded to pieces. He called to them to get their boat near enough for him to get into it and he would give them a hand. They did it with an effort, and he ran the line out and passed it to a gentleman on the wharf who had just then elbowed his way through the crowd, and who made it fast. That done, Bennett went on board the steamer, got a tackle on the hawser and, with the help of the engineer and fireman, hauled the ship to windward. Having secured the hawser against injury from chafing and made all safe he went ashore, feeling that he had done a good day's work. On his way to his lodgings the gentleman who had given him a hand on the wharf overtook him. He proved to be the superintendent of the company owning the steamer. Lambert was his name. He had been watching Bennett's actions from start to finish and now was curious to know if he wanted work. The upshot of their talk was that Bennett, not yet nineteen years old, was then and there put in charge of the vessel with five dollars and a half a day as his pay till it was finished. He was virtually the captain of it, and that was the beginning of his success. "That is how it sometimes pays to help another fellow," he said in ending his story.

The whole of Bennett's life is much like that. He saved money and bought a share in a scow; then another share. Next he was part owner in a sea-going ship. By and by he had a part in many and with wealth came greater ease of living, home and family. In 1858 he married Miss Christine Hansen, who, after more than half a century of a happy married life, survives her husband, surrounded by the love of her children and the deep affection and regard of very many friends. I fancy she is much like her mother-in-law. They came of the same people and country, and I know of none that has better preserved the ideals and dignity of true womanhood. Mrs. Madison was her husband's helpmeet in days of joy and in days of sorrow. The city of their home did them well-deserved honor at their golden anniversary.* Their proudest gift on that day was the photograph of the President of the United States which he sent them, together with his strong personal greetings. It had been my dear hope to bring together the two men who in their sturdy citizenship had so much in common, on Mr. Roosevelt's visit to the Pacific Coast last spring (1911); but it was not to be. Bennett was already gathered to his fathers. From the California University Mr. Roosevelt sent a message of sympathy to the stricken widow.

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*Excerpt from the San Francisco papers anent Captain and Mrs. Madison's golden wedding anniversary:

"The guests, comprising relatives and some old-time friends, assembled in the reception room of Hotel Fairmont and at 7:30 o'clock marched through the magnificent ball-room, headed by Captain and Mrs. Madison, to the Red Room, where the banquet was held. The company marched through the beautifully mirrored ball-room to the music of Mendelssohn's Wedding March by a special orchestra.

"The great table around which sat thirty-three guests was richly decorated with golden chrysanthemums and ferns. Candelabra in groups and singly, with golden shades, were artistically arranged among the flowers with a wonderfully pleasing effect. The magnificent repast was such as an institution like the Fairmont could get up and was thoroughly enjoyed by the host of people.

"All praise and honor was rendered to the golden wedding couple in song and speech by the toastmaster, Mr. James Madison, and the speakers who responded to the many toasts. The photographs of President Roosevelt and Mr. Jacob Riis, with their autographs upon them, occupied a prominent place on the table, and the health and happiness of the honored, though absent, guests was frequently toasted.

"Captain Charles Nelson spoke on 'Past Revolutions and the Silver Wedding Twenty-five Years Ago.' Captain Jacob Jensen handled 'President Roosevelt' very effectively and in a manner that was heartily approved by all. Captain J. C. Eschen spoke on 'Olden Times' in a very humorous manner. Captain Robert Minor talked about 'Financial Experiences' in a pleasing way. Mr. James Madison toasted the golden wedding couple most eloquently. Mr. M. J. Madison spoke on 'The Grandchildren,' presenting such a pretty sight gathered about the table. Many other toasts were spoken and several original poems were offered to the golden wedding couple.

"The orchestra rendered delightful music with American and Danish songs which were heartily joined in by all the happy company. Many telegrams and letters were read to add to the enjoyment. The time passed so pleasantly and enjoyably that it was with extreme regret the hour of midnight came so quickly and brought to an end an affair that was acknowledged by all to be far the best any of the company had ever attended."

Captain and Mrs. Madison were blessed with five children—two sons and three daughters. The Captain died January 16, 1911. Mr. Martin J. Madison succeeded him in business. This very efficient and highly esteemed young man is now the controlling head of Captain Bennett H. Madison's extensive interests.

That is the story of Bennett H. Madison, as I can tell it. The many eventful years of his life in the community he made his home are part of its history, and they are of the best part of it. He was ever a busy, hard-working man. He had his losses, but never a dishonest one. His word was as good as any man's bond. A good cause he was ever ready to help. That he should help found the Scandinavian Lutheran church of Our Savior and for years be one of its strong supporters was to be expected of the man who never forgot his old pastor in the land of his birth, nor the day of his confirmation, when he solemnly pledged to serve God in his life and with his life. That pledge he kept. I well remember his telling me of how one Easter morning he lay out in the rigging of the ship *Simoon* off Cape Horn in a freezing gale from the west. She was a new ship and the rigging had stretched and hung slack. To get in the sails was hard and dangerous work, with the men half numbed by the cold and the salt spray. Struggling with all his might to hold his end up, he remembered the day and his thoughts flew over the seas to home and mother and the old church where the bells were ringing out their glad message on Easter morning, and he knew that he was safe, that God was with him. ''And then,'' he added with the touch of shrewd humor that was his, ''I reflected that the other watch aloft were having an even worse time sending down the sky-sail yards, for I was in the boatswain's gang on the lee side, and I was comforted.''

I wish to thank you, Pastor Stensrud, for letting me write these lines in memory of my friend. I never had a better.

HERMAN FRED SUHR

Mr Suhr, born at Oldenburg, Germany, December 28, 1851. He was educated in the schools of his native town. He emigrated to America in the summer of 1867, arriving in New York, August 30th. In the city of New York he followed the grocery business until 1875, when he moved to San Francisco and again took up the grocery business. In 1884 he entered that field of business which has made the Suhr name famous in San Francisco and in the circles extending far beyond the confines of the bay cities community—that of funeral director and embalmer. ''In every thing there is an ideal, in business as in all other things, and in our business we have sought this ideal.'' These words come from the lips of Mr. Suhr himself. The public of San Francisco knows how true they are in his case. Mr. Suhr has sought the ideal of his business and he has reached it. A growth of over thirty years, from the crude conditions of pioneer days to a modern and fitting institution, a complete omission of suggestiveness pertaining to the nature of the business, a beautiful interior, tastefully furnished, appearing like a gorgeously equipped home, pleasing surroundings and a wonderful calm resting over the whole institution, every facility for the comfort of the bereaved and the best possible service given to those of moderate means as well as to those more fortunate in life—these are a few features of the ideal reached by Mr. Suhr in his business.

Starting as he did, in a modest way, no experience and no past to rely upon, he has built up an institution producing a volume of business surpassing the most sanguine expectations. Not long ago did he celebrate, in a quiet way, the twenty-fifth anniversary of his business, and the records show that he has conducted 9,225 funerals, averaging more than one a day. Before the destruction of San Francisco in 1906 he was located in Mission Street near Fifth. Now his establishment is found in Mission between Twenty-fifth and Twenty-sixth streets.

HERMAN FRED SUHR

August 5, 1876, Mr. Suhr married Miss Anna Ulrich. Three sons were born to them, H. Fred, Adolph F., deceased, and George L. Inheriting the conscientiousness and sympathetic nature of the father, and being practically raised in the business, the sons of Mr. Suhr are past-masters as funeral directors.

The Suhr family are pioneers in the business world of San Francisco. Their history is inseparably interwoven in the annals of our city. Though Americans, first, last and all the time, they are good Germans, loyal in the efforts of maintaining the heritage of the great fatherland. They have also taken an active part in the upbuilding of the German Lutheran Church of this city, being strong supporters of the Reverends J. M. Buehler and J. Schroeder, the pioneer pastors of the local German church of our city in connection with the Missouri Synod. Commercially and socially, the Suhrs are rated among the foremost citizens of San Francisco.

MARGWARD HANSEN

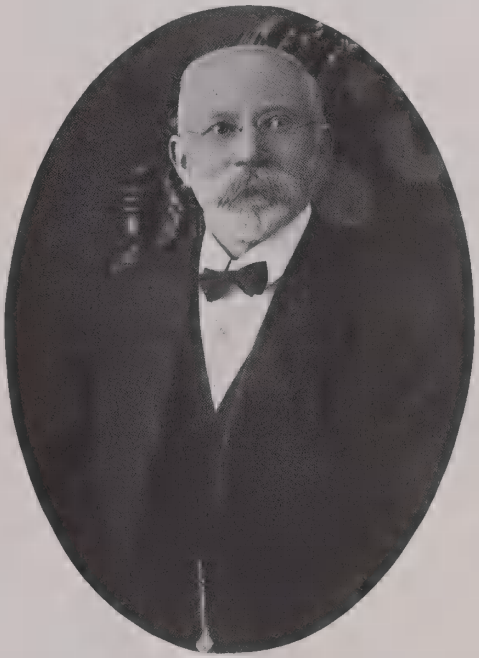
Mr Hansen was born at Ollerup, Denmark, July 16, 1845. Parents, Hans Margwardsen and Johanne Margrethe. He was educated in the schools of Ollerup and confirmed by Rev. J. S. Brandt. In 1866 he emigrated to America. He worked at his trade as machinist at New York, Chicago and Omaha. Thence he came to San Francisco and found employment at the old California Mill. He was an inventive genius and took out several patents. After a slight accident on a shaper, he invented a guard which brought him a diploma at the Mechanics' Fair. He was one of the founders of the United Workmen's Factory in San Francisco. He entered into the planing-mill business, forming a partnership with Albert Hansen, and together with him operated the well-known Pacific Planing Mill for many years. In 1893 he sold out his part in that mill, entering business with his brother, H. C. Hansen, and together with him established the King Planing Mill, operating for fifteen years, when, together with other buildings, it was torn down by the Southern Pacific Company, securing the site for its new depot. The King Planing Mill was one of the few buildings in that district not destroyed by fire in 1906.

M. HANSEN

In 1873 he was married to Metha Marie Rasmussen of Odense, Denmark, a young lady of finest grain. The wedding took place at Our Savior's Scandinavian Evangelical Lutheran Church, Rev. Christian N. Hvistendahl officiating. Seven children were born to them, of whom five are living. Mr. Hansen's ambition was to build a home in some suburban town. The beautiful place at Belmont was chosen, where he built a spacious and handsome mansion. Mr. Hansen had an eye for the artistic side of life. This mansion may be looked upon as the ideal home he had pictured to himself in his earlier years. Mr. Hansen died in 1912 after thirty-nine years of a happy married life. He was a business man of marked ability and success and had accumulated considerable wealth. He was a citizen, neighbor and friend of the real kind, ever bent on the upbuilding and welfare of the community and he was endowed with a charitable heart. Never did a hungry man or anyone in need of a lift return hungry or empty-handed from a visit to Mr. Hansen. This kindness of heart and sympathy was eminently shared by his good wife who to her husband was a true helpmate in life. Mr. Hansen was also of a religious bent of mind. It may truthfully be said that every church building project in San Francisco, if ever a request for help was made, received its due share of assistance from Mr. Hansen.

HANS CHRISTIAN HANSEN

Mr. Hansen was born at Ollerup, Denmark, June 26, 1855. His parents were Hans Margwardsen and Johanne Margrethe. He went to school at Ollerup and Egebjerg and was confirmed at Odense by Rev. Dr. L. Helweg. He served in the Danish army and was promoted to corporal. In 1882 he emigrated to America and came to San Francisco. Worked for ten years as millman in his brother's employ. Soon he became foreman. In 1893 he entered into partnership with his brother, operating for fifteen years the King Planing Mill, located in King Street near Fourth. In 1884 Mr. Hansen married Gertrude Katrine Hansen. Four children were born to them, Axel M., deceased, Agnes M, Holger R. and Swen F. Hansen, deceased. The family lived in San Francisco until May, 1909, when they moved to Alameda.

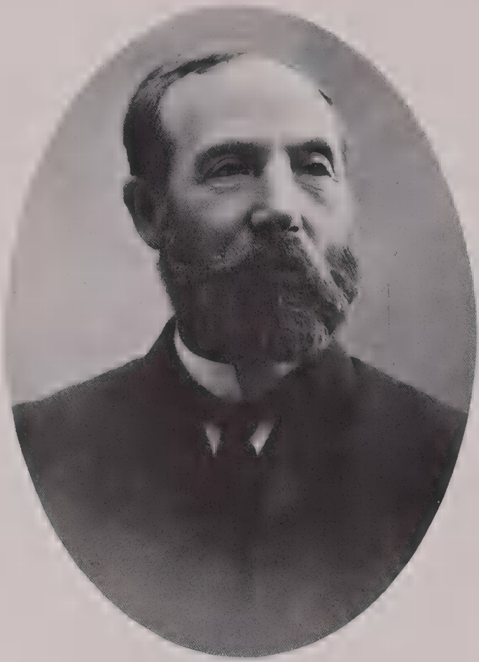

HANS CHRISTIAN HANSEN

Mr. Hansen has been one of the leading spirits in the establishment of the Danish colony at Solvang. The object of this colony is to form a settlement of Danish Lutherans in sunny California, where they might enjoy the benefits of the salubrious climate and rich soil for which this State is so justly famous, and to establish churches and schools and to worship their God according to the customs of the church in the Fatherland. Mr.

Hansen may now look upon this project as a successfully accomplished fact. All honor and credit are due him as one of the originators of the plan.

J. KRAGH NISSEN

Mr. Nissen was born in North Schleswig, Germany, November 23, 1840. At the age of fifteen he was confirmed by Rev. Richelieu. He was trained for entering the general merchandise business and went to Hamburg in June 1864, working there for three years. He emigrated to California, landing in San Francisco, July 29, 1867. Having tried his hand at various things, as clerk, farm-hand and waiter, and feeling dissatisfied with working for others, Mr. Nissen started a dry-goods wagon business and found it more profitable, there being very few stores in the interior country at that time.



J. K. NISSEN

December 12, 1869, Mr. Nissen married Claudine Buckholdt. Moved to San Lorenzo where he opened a store, leaving his wife in charge of the place, himself continuing his wagon business. Both being economical and industrious, they were ultimately able to buy a lot in the city of Hayward and erected a large two-story complex structure which served as store and hotel and dwelling. In 1889 he sold out and together with his family made a trip to Europe. He returned to California after two years and in 1897 resumed business in Hayward. In 1902 he retired from business, leaving it to his son and son-in-law, who are successfully conducting it at the present time.

Mrs. Nissen was born in North Schleswig, Germany, August 6, 1837. Came to California in 1868. She was a kind and true woman and loving mother. The last nine years of her life she was an invalid, but patient and God-fearing to the last. July 13, 1909, she died. Mr. and Mrs. Nissen had five children. Two of them, a girl and boy, died in infancy. One boy and two girls are still living. Their names are Rasmus K., Bena K. and Eda K.

The Nissens were always intensely interested in the work of God's church. In the course of years many attempts have been made to establish a Scandinavian Lutheran church at Hayward, but, sad to relate, every attempt was love's labor lost. The Nissen family, however, would never tire of trying again, and never was noticed in them an abatement in interest. Failing in his endeavors to establish a church of his own locally, to work for and support, Mr. Nissen did not give up his work for the church. Regularly he contributes to the cause of God's kingdom at large. Nor are the sick and the indigent forgotten. Mr. Nissen has been richly blessed with earthly goods and therefore he remembers others in less fortunate circumstances, dividing to them of his ample means in grateful recognition of the bounteous goodness of the Giver of all good gifts.

ADOLF MOSLING ANDERSEN MOSHEIM

Mr. Mosheim was born May 9, 1866, in Vik, Helgeland, Norway. He is the son of a prominent sea captain, Johan Mölmand Andersen and the great-grandson of Baron Heinrich von Borchenhagen, a native of Hanover, Germany, who emigrated to Norway in 1734, taking up his residence at Brönö. His mother's name is Else Pauline Angell Thrones, a relative of Rev. Thomas Angell, the well-known minister of the gospel, of the city of Trondhjem.

Mr. Mosheim received a liberal education in the home country. After having gone through the regular state high schools and graduating from the military academy, he completed a course in tectonics in Christiania. Having finished his education, the next step was to carve out his fortune in the wide world.

ADOLF MOSLING ANDERSEN MOSHEIM

In 1890 he went to South America in the employ of a railroad construction company engaged in building a line over the Andes Mountains from Argentine to Chile. During his stay in South America Mr. Mosheim had a very interesting experience. In 1891 a revolution broke out in Chile. Mr. Mosheim was requested by Mr. Jose Manuel Balmazeda (the celebrated Chilean statesman, orator and reformer, and in 1886 elected president of his country) to conduct his soldiers to Chile through a well-nigh impassable mountain pass, the march being effected during a blinding snowstorm. He served under President Balmazeda as first lieutenant and took part in many a sharp engagement, finally receiving a bullet wound in the right shoulder and was recommended for bravery. The revolution was quelled, Balmazeda defeated and hence all tokens of honor due his brave men gone.

In November, 1891, Mr. Mosheim returned to Norway and received an appointment as surveyor in connection with the government railways. In 1897 news from the Alaska gold fields in America reached the fatherland and in March of the same year he headed for those regions of lurid fame. On this journey he visited some of the larger cities of the United States, among them Chicago, where he spent some time with his old friend, John Benson, editor of ''Skandinaven'' and was engaged by him as the representative in Alaska of that well-known Norwegian-American journal. In Alaska he stayed for five years and thence came to San Francisco in November, 1902. Here he at once secured employment as engineer with the Western Pacific Railroad Company. In 1904 he secured the appointment as surveyor on the United State Alaskan Border Commission. From this position he resigned in 1910. For the last six years he has been in the employ of the city of San Francisco as assistant engineer on the Board of Public Works.

Mr. Mosheim is one of the most representative Norwegians in our bay cities community.

June 3, 1893, Mr. Mosheim was married to Inga Hansen of Kristiansand, Norway. They have one daughter, Gudrun, and reside in Alpine Terrace, San Francisco.

RESOURCES OF THE COUNTIES EMBRACED IN THE GREAT CENTRAL VALLEYS OF CALIFORNIA

THE SAN JOAQUIN VALLEY

CALAVERAS COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area....	1,027 sq. miles	Population..	8,882	11,200	9,171
County seat....	San Andreas	Population..	1,640	1,683	1,120
Population per square mile, 8.9					
Mokelumne Hill (Station):				Highest	Lowest
Elevation.......	1,550 feet	Temperature (1914)...		101	30
Rainfall........	32.32 inches	Snow................			3.0 inches

CALAVERAS is located on the long, gradual western slope of the Sierra Nevada, a little above the center of the State north and south. The Sierra on the east is an abrupt wall plunging down 10,000 feet in ten miles, while the westward side is a long, grand sweep, full seventy miles from foothill to summit. On the east is the great desert basin of Nevada and Utah; on the west the exuberance of California valleys, rich in meadows, grain fields and orchards. Above the level plain rise the foothills in waves or ripples, hardly distinguishable from the plains at first, but more rolling as you go upward, with long swells of hill and little dales and scattering growth of oak and pine and patches of chaparral.

The elevation rises gradually from about 150 feet to table-lands lying 4,000 feet and peaks of 7,500 feet.

Nature has been prodigal of her gifts to Calaveras County. She has endowed it with unstinted generosity, not alone in the grandeur of its scenery, in the volume of its streams, in the number and majesty of its trees, but also in the salubrity of its climate, in the prolific fertility of its soil, and in the wealth of mineral beneath its surface. Calaveras County offers splendid opportunities for the farmer, the horticulturist, the vineyardist, the cattle man, the miner, the man interested in lumber and in water power.

The fruits and grains of fertile California all flourish within the borders of Calaveras County. They attain a growth and a deliciousness of flavor as fine as any in the world. The mountain potatoes, walnuts, apples, grapes, olives, oranges, peaches, pears and such fruits of Calaveras County are considered among the best to be found anywhere.

RICH PASTURES FOR CATTLE

The mountains supply abundant summer pasturage for stock, the foothills an abundance for winter. Thousands of head of both cattle and sheep are shipped from Calaveras County every year—cattle and sheep that bring top prices for the men who raise them.

ABUNDANCE OF FINE TIMBER

This county has a wealth of timber, and lumbering forms one of many industries. Its vast forests of magnificent trees consist principally of pine, fir, spruce, oak, cedar, and *Sequoia Gigantea* or California Big Trees.

The Calaveras timber is practically virgin, and it is conservatively estimated that the belt contains not less than three billion feet of pine and fir—seventy-five per cent of which is pine. The proportion of sugar pine is approximately thirty-five per cent and is regarded by experts as the finest pine in the State.

WORLD-FAMOUS BIG TREES

The Big Trees, *Sequoia Gigantea,* are one of the wonders of the world. These trees reach a diameter of forty feet and a height of five hundred feet. They are the most wonderful of all Nature's creations. They were born at the earliest beginning of the world's ancient civilization, and since then through the passing of centuries they have grown to their majestic proportions. These monumental trees formed the subject of many of the writings of John Muir, famous naturalist and poet. Through his influence the Big Trees were placed under Government protection.

A great mother lode extending across the county from northwest to southeast has enriched the world's supply of gold many millions of dollars. Such well known mines as Melones, Carson Hill, Gold Cliff, Utica, Lightner, Angels, Thorpe, Demarest and Gwin Mine are world-famous. About eight miles to the west and running parallel with the mother lode is the western lode with the Alta Royal Consolidated, Mountain King, Pine Log and North Hill mines. About eight miles to the east of the mother lode and also paralleling it extends the eastern lode, with the Tanner Mine at Murphys, the Washington, the famous Sheep Ranch, Lockwood and the West Point mines. There are also many partially developed and undeveloped properties of great promise in all of these lodes, but many of them need the vitalizing touch of capital. Many ancient river channels traverse the central and western portions of the county and will in time add their portion to the general output.

Through the western part of the county and paralleling the western lode extends a great copper belt, with many good properties, including the Campo Seco mines, Copperopolis mines and many others partially developed. The county also has many deposits of mineral value such as iron ore, asbestos, slate, graphite, ochres (red and yellow), gypsum, chalk, potters clay, chrome, marble, lime, etc.

WATER POWER AND IRRIGATION

Calaveras County generates the electricity that furnishes power and light in scores of cities and smaller communities in the State. The Stanislaus River, forming the southern border, the Mokelumne River, forming the northern border, and the Calaveras River, with its many branches flowing through the center of the county, provide the power.

The United States Government is planning to build great storage reservoirs in which will be retained the water that has been used to generate electricity. By means of the system of ditches constructed and used by the early gravel miners this water supply will be easily available in every part of the country.

There is an abundance of quail, deer, rabbits, squirrels, grouse, and excellent trout fishing for the sportsman, while our mountains are a veritable paradise for the summer camper, with many points of interest, such as Mercer's Cave at Murphys, the world's famous Big Trees and the Dorrington summer resort, all with good hotels and camping grounds and within easy auto rides from the various railroads.

OPPORTUNITIES FOR THE HOMESEEKER

For the homeseeker there are many opportunities. Scattered all through the county, from its lowest levels to an elevation of 3,000 feet, are countless valleys of fertile soil, which is very reasonable in price, and abundantly productive when properly worked and cared for.

Calaveras County offers not only fertile soil and good climate; it offers the homeseeker all the comforts of a settled community.

CALAVERAS COUNTY SUMMARY

Number of Farms Classified by Size	
Under 3 acres	....
3 to 9 acres	25
10 to 19 acres	14
20 to 49 acres	48
50 to 99 acres	45
100 to 174 acres	171
175 to 259 acres	60
260 to 499 acres	127
500 to 999 acres	80
1,000 acres and over	62
Total	632
Total in 1900	575

Land and Farm Areas	
Approximate land, acres	657,280
Land in farms in 1910	271,401
Land in farms in 1900	212,820
Improved land in farms in 1910	59,104
Improved land in farms in 1900	41,402
Woodland in farms	149,642
Other unimproved land	62,655

Value of all Farm Property	
Total in 1910	$3,973,409
Total in 1900	2,335,659
Per cent increase 1900-1910	70.1
Land in 1910	2,376,303
Land in 1900	1,393,510
Buildings in 1910	664,000
Buildings in 1900	427,190
Implements and machinery in 1910	138,905
Implements and machinery in 1900	89,030
Domestic animals, poultry and bees in 1910	794,201
Domestic animals, poultry and bees in 1900	425,929

Domestic Animals on Farms and Ranges	
Cattle—	
Dairy cows	1,824
Other cows	8,407
Yearling heifers	2,432
Calves	3,355
Yearling steers and bulls	2,057
Other steers and bulls	2,902
Total	20,977
Value	$422,395

CALAVERAS COUNTY SUMMARY—Concluded.

Horses—	
Mature horses	3,143
Yearling colts	302
Spring colts	203
Total	3,648
Value	$264,717
Mules—	
Mature mules	25
Yearling colts	13
Spring colts	25
Total	63
Value	$3,920
Asses and burros—	
Number	27
Value	$1,850
Swine—	
Mature hogs	2,588
Spring pigs	1,586
Total	4,174
Value	$24,368
Sheep—	
Rams, ewes and wethers	10,145
Spring lambs	5,215
Total	15,360
Value	$54,509
Goats—	
Number	3,348
Value	$7,931
Total value all domestic animals	$779,690
Poultry and bees—	
Poultry of all kinds	23,242
Value	$13,519
Colonies of bees	362
Value	$992

Principal Crops

Description	Acres	Bushels
Corn	80	1,776
Oats	108	2,121
Wheat	51	439
Barley	222	4,833
Kaffir corn and milo maize	5	48
Dry edible beans	8	238
Potatoes	147	20,997
Hay and forage—	Acres	Tons
Timothy alone	79	72
Timothy and clover mixed	118	290
Clover alone	102	206
Alfalfa	649	2,313
Other tame and cultivated grasses	662	587
Wild, salt or prairie grasses	4,648	3,431
Grains cut green	9,023	8,787
Total	15,281	15,686

Poultry products—	
Poultry raised, number	31,410
Eggs produced, dozen	107,387
Value poultry and eggs produced	$49,807
Honey and wax—	
Honey produced, pounds	8,413
Wax produced, pounds	118
Value of honey and wax produced	$632
Wool—	
Wool, fleeces shorn	15,677
Mohair and goat hair, fleeces shorn	517
Value wool and mohair produced	$11,551

Special crops—	
Potatoes, acres	147
All other vegetables, acres	278
Sugar beets, acres	1

Orchard fruits—	Number Bearing Trees
Apples	13,341
Apricots	672
Cherries	459
Peaches and nectarines	5,954
Pears	2,178
Prunes and plums	8,265
Total	30,869

Tropical fruits—	Number Bearing Trees
Figs	1,839
Lemons	19
Oranges	388
Pomelos	3
Olives	4,065
Total	6,314

Grapevines—	
Number in bearing	212,300
Small fruits—	
Strawberries, acres	5
Blackberries and dewberries, acres	14
All others, acres	15
Total	34

Nuts—	Number Bearing Trees
Almonds	14,624
Pecans	6
Walnuts	832
Total	15,462

Irrigation

Number of farms irrigated in 1909	154
Acres irrigated in 1909	1,275
Acreage enterprises were capable of irrigating in 1910	3,161
Acreage included in projects	3,919
Main ditches, number	148
Length, miles	124
Laterals, number	32
Length, miles	31
Flowing wells, number	6
Pumped wells, number	7
Cost of irrigation enterprises up to July 1, 1910	$121,033
Average cost per acre irrigation enterprises were capable of irrigating in 1910	32.29

Mineral Production in 1913

Substance	Amount	Value
Clay, tons	2,000	$ 4,500
Copper, pounds	5,063,187	784,794
Gold		1,175,208
Graphite, pounds	2,500	25
Lead, pounds	7,006	308
Limestone, tons	2,000	1,400
Mineral paint, tons	28	190
Mineral water, gallons	11,500	5,500
Silver		61,076
Other minerals		9,900
Total		$2,042,901
Number of mineral springs		1

FRESNO COUNTY

Date of creation, April 19, 1856.

		1890	1900	1910
Land area....5,950 sq. miles	Population,	32,025	37,862	75,657
County seat...Fresno (city)	Population,	10,818	12,470	24,892

Population per square mile, 12.7

		Highest	Lowest
Elevation....... 293 feet	Temperature (1914)...	106	27
Rainfall........ 9.67 inches	Snow................		....

Fresno County is situated in the center of the State and in the middle of the fertile San Joaquin Valley. There are only five counties which exceed Fresno in size—San Bernardino, Inyo, Kern, Riverside and Siskiyou, in the order named. When Fresno was first formed it was considerably larger, but on March 11, 1893, a large slice, consisting of 2,121 square miles, was formed into Madera County; and still more recently Fresno County was again mutilated by 202 square miles of the southeast portion being transferred to Kings County on April 12, 1909. Before being partitioned, Fresno County comprised 8,214 square miles, but although the land area has been thus reduced to 5,950 square miles, the county ranks sixth of the fifty-eight in the State, and is one of the most productive. It is also the fifth largest in population, being only exceeded by San Francisco, Los Angeles, Alameda and Santa Clara. The word "Fresno," in Spanish, signifies ash tree, and it was because of the abundance of mountain ash in the mountains of this county that it received its name.

Fresno County is naturally subdivided into two portions—plains and mountains. The plains are the bottom of the San Joaquin Valley, extending from the foot of the Coast Range on the west to the foothills of the Sierra Nevada on the east. From the first foothills the rise is rapid, the mountains culminating in peaks rising 10,000 to 12,000 feet high. The country about Fresno is a vast plain intersected by the San Joaquin and Kings rivers and their tributaries. Four natural soil divisions have been recognized—the foothill region, where agriculture was formerly confined to grazing; the plains of the valley, with red soils lying near the hills; the "white ash" soil found farther out in the plain, and the bottoms, or alluvial lands, along the Kings River.

SEASONS

There is a dry and wet season, the former from about May to September, and the latter from the middle of October or early part of November. The rains, which are at irregular intervals during the winter, seldom last more than two or three days at a time. There are about 238 days of sunshine in the year. The atmosphere during the summer months is dry, and the heat not nearly so oppressive as in the East and other places where the humidity is great. Sunstroke is unknown.

HISTORY

The county has passed through four stages of development. First came mining in the early days, 1860-64. Secondly came the stock-raising period, which lasted until 1874; thirdly, about 1868, the farming interests sprang up, although prior to the advent of the railroad in 1870 agriculture amounted to very little. The fourth, and most important, may be called the viticultural and fruit era, which began to come into prominence early in the eighties and has now become the leading feature of the county.

As California holds the first place among all the states in the Union in irrigation, so Fresno is the leading county in the State, both in number and extent of its canals and ditches, having more than double the acreage under irrigation than has any other county.

INDUSTRIES AND CROPS

During the last ten years, the dairy industry has made great progress, except in the manufacture of cheese.

Fresno County holds the first place in the production of grapes, raisins, figs, sweet wines and brandy, and is one of the leading counties of the State in the production of peaches, apricots and olives, and the acreage in citrus fruits is rapidly increasing. Fresno is one of the largest producers of olive oil and pickled olives.

In figs, the county has been a large producer for many years, and is noted for the now well-known Smyrna, or "Calimyrna" figs, which were first introduced into this State by George C. Roeding. The quantity now packed in Fresno amounts to several thousand tons per annum.

The varieties of fish include salmon, black bass, trout and catfish, all of which are plentiful.

There is an abundance of game, including quail, doves, a large variety of ducks and wild geese, but there is no means at present of ascertaining either the quantity or money value of either fish or game. The sums received for hunting licenses, however, are considerable.

The value of the lumber industry is very large, varying from sixty to seventy-five million feet, board measure, with an average value of some two million dollars a year, comprising sugar pine, white pine, fir and sequoia.

The great increase in the manufactures of Fresno is due chiefly to the increase in the canning and preserving of fruits and vegetables, the value of products for which amounted to $6,942,440. The greatest crop is in raisins, in which Fresno leads the world.

In recent years the production of petroleum has developed into one of the most important industries. In 1900 the wells at Coalinga produced 532,000 barrels, of the value of about $547,960; in 1914, 18,956,965 barrels valued at $7,927,736. The county ranks second in the State in the value of minerals produced, the total in 1913 being $8,438,810.

THE VINEYARDS

Viticulture is raised to a higher standard of productivity in Fresno County than any other place in the world. More than 122,559 acres are under a high state of cultivation. The production of the vineyards in 1913 was valued at $12,143,398.

There are more than 100 varieties of grapes raised in the county, the principal varieties being the Muscat, Malaga, Thompson's Seedless, Emperor, Seedless Sultana, Rose of Peru, Flame Tokay, Datter de Beyrouth, Zinfandel, Malvoise and Mission.

Thirty per cent of the grapes are converted into wine; 60 per cent into raisins and 10 per cent shipped out as table grapes.

The Department of Agriculture maintains an experimental station at Fresno.

RAISINS

For many years Fresno County has held supremacy as the world's center of raisin production. The exceptional combination of soil and climatic conditions necessary to this culture is found throughout the county.

Raisins form one-tenth of the county's annual income. Twenty-five years ago Fresno loomed up as one of the leading raisin-producing districts of America, and today one-fourth of the raisin crop of the world is raised here. The annual production is more than 94,000,000 pounds.

The chief varieties of raisin grapes grown in the county are the Thompson's Seedless, Muscat, Seedless Sultana and Malaga. The Thompson is a heavy yielder, but being a smaller grape than the Muscat its average production is about the same as the Muscat. The Muscat is the best known in the world's markets.

Raisins are cured in the field on trays between the rows of vines. They are exposed to the sun for about twenty days. It is in this process that the dry heat of the summer proves precious to Fresno County, as well as the 150 summer days without rain. After the curing of the raisins they are hard and dry. To soften them they are placed in large open boxes each holding 100 pounds. These sweat boxes are stored in the shade, and the raisins sweat, exuding the remaining moisture and thereby softening the skin.

Fresno County introduced the ''seeded'' or stoned raisin to the world. This remarkable process was initiated in 1896 when 500 tons were placed on the market. Fresno County last year marketed 43,000 tons of seeded raisins.

The annual celebration of Raisin Day, April 30th, is known the country over.

The most remarkable by-product factory in the world, and the only one of its kind, is making us of raisin seeds, stems and other grape material which was formerly used only as fertilizer. Cream of tartar, vinegar, grape oil for soap and paints are a few of the many products of this plant.

WINE GRAPES

After considering the enormity of the raisin output of the county it would seem that all the grapes were used for this market, but with twenty-seven wineries—some of them among the largest in the world—and twenty-nine distilleries, Fresno commands further attention as the leading sweet wine district of the State. The acreage of wine grapes runs from small vineyards of a few acres to holdings of 2,500 and 3,300 acres.

Port wine is the chief output among the sweet wines, being about fifty-five per cent of the total. Sherry is next being one-third of the total, and Angelica, Muscatel, Tokay and Malaga follow in the order named.

IRRIGATION, THE HARBINGER OF THE NEW ERA

The largest winery in the county is the Wahtoke. This has a capacity of 2,000,000 gallons a year. M. F. Tarpey's La Paloma winery, near Clovis, has an output of 1,500,000 gallons. The Italian-Swiss Colony has a winery at Selma producing 750,000 gallons a year, and another at Kingsburg with a capacity of 1,000,000.

TABLE GRAPES

More than 12,000 acres are devoted to the production of this fruit, the chief varieties being the Emperor and the Malaga. The Flame Tokay is also grown and the Muscat, Malaga, Rose of Peru and Thompson's Seedless, while used chiefly for raisin production, are sent into the table market in large quantities.

About ten per cent of the grape production is shipped to the markets green.

Climatic conditions are so remarkable in the thermal belt that some growers allow their grapes to remain on the vines until December 10, when they are sent to the Eastern holiday markets.

The packing of grapes in sterilized sawdust has proven even better than the Spanish method of packing grapes in cork dust. By this means Emperor grapes of Fresno County are sent all over the world.

DECIDUOUS FRUITS

California is known over the world for its deciduous fruits, and Fresno has done a large share in accomplishing this development. The versatility of the county is markedly shown in the strength of its orchards. The development is even the more remarkable when it is remembered that less than thirty years ago the San Joaquin was one of the greatest grain countries in the world, and trees were few.

Today Fresno ranks as the leading peach district of the world, and its wealth of apricots, figs, nectarines, apples, pears, plums and prunes is not small. The bulk of the deciduous fruit crop is canned, while a large amount is dried.

Fresno County is the healthiest orchard country in the world. There is not a single fumigating outfit in the county except those used for inspection of incoming stock. In the orchards intensive culture is shown and it is quite ordinary to raise two and even three crops at the same time. In many cases grape vines will be seen between the trees, and that big wealth producer, the fig tree, is commonly used as a border.

FRESNO COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	6
3 to 9 acres	267
10 to 19 acres	598
20 to 49 acres	3,240
50 to 99 acres	951
100 to 174 acres	609
175 to 259 acres	142
260 to 499 acres	202
500 to 999 acres	119
1,000 acres and over	111
Total	6,245
Total in 1900	3,290

Land and Farm Areas

Approximate land, acres	3,808,000
Land in farms in 1910	1,106,616
Land in farms in 1900	1,284,736
Improved land in farms in 1910	590,205
Improved land in farms in 1900	786,337
Woodland in farms	93,194
Other unimproved land	423,217

Value of All Farm Property

Total value in 1910	$92,583,058
Total value in 1900	42,829,479
Per cent increase 1900-1910	*
Land in 1910	75,136,654
Land in 1900	34,201,530
Buildings in 1910	6,861,289
Buildings in 1900	3,092,140
Implements and machinery in 1910	3,228,706
Implements and machinery in 1900	1,593,890
Domestic animals, poultry and bees in 1910	7,356,409
Domestic animals, poultry and bees in 1900	3,941,919

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	22,241
Other cows	42,001
Yearling heifers	13,117
Calves	12,682
Yearling steers and bulls	15,354
Other steers and bulls	22,230
Total	127,625
Value	$3,258,420
Horses—	
Mature horses	22,063
Yearling colts	1,899
Spring colts	1,047
Total	25,009
Value	$2,583,216
Mules—	
Mature mules	3,498
Yearling colts	298
Spring colts	183
Total	3,979
Value	$534,660
Asses and burros—	
Number	101
Value	$34,883
Swine—	
Mature hogs	20,134
Spring pigs	13,016
Total	33,150
Value	$230,325
Sheep—	
Rams, ewes and wethers	94,757
Spring lambs	47,254
Total	142,011
Value	$555,057
Goats—	
Number	4,558
Value	$8,485
Total value of all domestic animals	$7,205,046
Poultry and bees—	
Poultry of all kinds	213,108
Value	$116,504
Colonies of bees	9,242
Value	$34,859

Principal Crops

Description	Acres	Bushels
Corn	1,422	37,726
Oats	1,554	20,027
Wheat	7,829	97,391
Barley	32,132	694,234
Kaffir corn and milo maize	1,689	37,506
Dry edible beans	9	155
Potatoes	218	23,891

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*In comparing the data secured in 1910 with that for 1900, it should be remembered that a part of the county was transferred to Kings County in 1909.

FRESNO COUNTY SUMMARY—Concluded.

Hay and forage—	Acres	Tons
Timothy and clover mixed	3	6
Clover alone	10	62
Alfalfa	47,776	167,217
Other tame and cultivated grasses	243	208
Wild, salt or prairie grasses	2,741	2,343
Grains cut green	44,159	43,863
All other hay and forage	333	960
Totals	95,265	214,659

Poultry products—	
Poultry raised, number	266,221
Eggs produced, dozen	1,267,840
Value of poultry and eggs produced	$419,265
Honey and wax—	
Honey produced, pounds	616,609
Wax produced, pounds	7,261
Value of honey and wax produced	$33,356
Wool—	
Wool, fleeces shorn	107,802
Mohair and goat hair, fleeces shorn	1,900
Value of wool and mohair produced	$109,982
Special crops—	
Potatoes, acres	218
Sweet potatoes, acres	57
All other vegetables, acres	1,391
Sugar beets, acres	228

Orchard fruits—	Number Bearing Trees
Apples	32,097
Apricots	186,823
Cherries	2,729
Peaches and nectarines	2,277,314
Pears	13,356
Prunes and plums	66,926
Total	2,579,245

Tropical fruits—	Number Bearing Trees
Figs	120,124
Lemons	12,389
Oranges	85,781
Pomelos	346
Olives	72,788
Total	291,428

Grapevines—	
Number in bearing	40,687,207
Small fruits—	
Strawberries, acres	148
Blackberries and dewberries, acres	91
All others, acres	71
Total, acres	310

Nuts—	Number Bearing Trees
Almonds	7,390
Pecans	56
Walnuts	634
Total	8,080

Irrigation

Number of farms irrigated in 1909	5,310
Acres irrigated in 1909	402,318
Acreage enterprises were capable of irrigating in 1910	560,326
Acreage included in projects	633,652
Main ditches, number	254
Length, miles	831
Laterals, number	688
Length, miles	1,354
Flowing wells, number	3
Pumped wells, number	855
Cost of irrigation enterprises up to July 1, 1910	$1,898,460
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$3.39

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	5,500	$ 44,000
Gold	....	2,846
Magnesite, tons	1,135	9,080
Natural gas, thousand	236,100	23,610
Petroleum, barrels	18,956,965	7,927,736
Quicksilver, flasks	375	15,086
Silver	....	15
Stone industry		416,437
Total		$8,438,810
Number of mineral springs		9

KINGS COUNTY

Date of creation, March 22, 1893; organized from part of Tulare County; extended in 1909 by annexation of part of Fresno County.

		1890	1900	1910
Land area....1,159 sq. miles	Population..	....	9,871	16,230
County seat..Hanford (city)	Population..	942	2,929	4,829

Population per square mile, 14.0

		Highest	Lowest
Elevation........ 249 feet	Temperature (1914)...	...	..
Rainfall..........	Snow................		....

In the very heart of the great fertile valley of the San Joaquin lies Kings County, one of the smallest, one of the youngest, but one of the richest counties of this State. There are no rocks to contend with, no land to clean, no hills and hollows to level.

Wheat and other kinds of grain were in former years the most important products of Kings County soil. Immense tracts of land were originally sown and great crops gathered in, but with the subdividing of the land into smaller holdings, the growing of grain is not so extensive an industry at the present time.

Viticulture is an industry that has assumed large proportions. There are nearly 5,000,000 grape vines in the county.

Barley and alfalfa form two of the leading products and sugar beets are a great factor in Kings County prosperity. The discovery a few years ago that a great deal of what seemed to be almost waste land is particularly well adapted to the raising of this product has changed the whole face of the county in some parts. About Corcoran, where the erection of a large sugar factory has opened up a market, the growing of beets is being prosecuted very extensively.

Dairying ranks secondary to fruit and grape culture. There are many creameries and skimming stations located so as to be in convenient touch with all sections of the county, and there is a constant and ever-increasing demand for butter fat.

The Kings River supplies most of the water required for irrigation, but Cross Creek or Kaweah River, at the easterly end of the county, a stream of lesser proportions, does its full share in this work of irrigation. It was in 1872 that the plan of irrigating from these streams was first put into practical operation. The principal irrigating companies at present operating in the county are the People's Ditch Company, the Last Chance Ditch Company, the Lemoore Canal and Irrigation Company, the Lakeside Ditch Company, and other smaller ones are also in operation.

MORE ABOUT WATER

Kings County is particularly favored, having several irrigation companies, organized and maintained by the landowners; these water-rights go with the land in perpetuity. There is an average rainfall of eight inches in this county, falling during the fall and winter season, which proves valuable because certain lands hold this moisture by cultivation, sufficiently well to insure crops.

But the rainfall is not counted in the reckoning, because the far-away mountains keep the Kings and Tule rivers well filled with water until the season for all need of water for the crops is past. This system of securing water from the pools in the streams, where dams or weirs are maintained, is called the gravity system. To make it plainer to the uninformed, owing to the very slight gravitation from the streams, the water flows readily into the main canals and from these into the laterals which feed the farms.

Nature has been doubly bountiful to Kings County. There are vast reservoirs and fountains of crystal water in the sub-strata of these lands and hundreds of artesian and pumping wells supply the ranches against any sort of emergency. Some of these artesian wells flow a million gallons a day and the water is found at reasonable depth, varying of course. The cost of boring and equipping both kinds of wells is very reasonable. No ranch is without its wells at houses and barns for domestic purposes, the sweetest of water being found at 50 to 100 feet.

This development of the water supply by wells has been going on, year by year, and only recently the prediction of geological experts that artesian water underlies almost all of the land of the county, has been verified. Late in the fall of 1914, newly discovered wells in regions hitherto undeveloped, brought all of 750,000 acres of the Kings County farm lands under irrigation. It is now only a question of time, of new settlers, and additional demand for lands, until Kings County becomes one vast garden of fruits and alfalfa, with livestock and dairies everywhere. These recent discoveries of artesian wells, have to a large extent, almost brought the entire county safely under the term "irrigated, and available for farming."

CLIMATE

Undoubtedly the San Joaquin Valley is a favored region in having a most equable climate the year around. There are no extremes that cause discomfort at any season, and that speaks volumes. There are about eleven months of growing season, each year, and from 275 to 300 days of sunshine. What is termed the "rainy season" in Kings County, is hardly a rainy season at all. There are seldom more than two or three days of rain at a time, often no more than showers. The rains fall between November and May, and discomfort is rarely experienced. The average temperature of the year is 68 degrees, the coldest "winter weather" being very seldom less than 30 degrees above zero, with occasional light frosts up to 70 degrees during mid-day, a greater part of the time. In Kings County the humidity is very low—the dry atmosphere making the hot weather of the summers tolerable, and with even the temperature registering 100 degrees at the very highest, farmers work out in the fields without discomfort and heat prostrations are absolutely unknown. The summer weather ordinarily runs from 90 to 100 at the very hottest, it being infrequent that the 100 temperature is reached. The crowning feature of the farming conditions which are making this county and her people prosperous beyond compare, is the mild, dry, healthful climate.

KINGS COUNTY SUMMARY

Number of Farms Classified by Size	
Under 3 acres	7
3 to 9 acres	69
10 to 19 acres	159
20 to 49 acres	643
50 to 99 acres	377
100 to 174 acres	287
175 to 259 acres	77
260 to 499 acres	133
500 to 999 acres	42
1,000 acres and over	43
Total*	1,837
Total in 1900	932
Land and Farm Areas	
Approximate land, acres	741,760
Land in farms in 1910	373,823
Land in farms in 1900	387,505
Improved land in farms in 1910	196,569
Improved land in farms in 1900	262,148
Woodland in farms	6,724
Other unimproved land	170,530
Value of All Farm Property	
Total value in 1910	$33,312,292
Total value in 1900	5,921,907
Per cent increase 1900-1910	*
Land in 1910	26,007,591
Land in 1900	3,420,410
Buildings in 1910	2,145,975
Buildings in 1900	811,920
Implements and machinery in 1910	654,971
Implements and machinery in 1900	348,330
Domestic animals, poultry and bees in 1910	4,503,755
Domestic animals, poultry and bees in 1900	1,341,247

Domestic Animals on Farms and Ranges	
Cattle—	
Dairy cows	18,593
Other cows	21,655
Yearling heifers	7,281
Calves	8,793
Yearling steers and bulls	3,745
Other steers and bulls	14,908
Total	74,975
Value	$2,481,281
Horses—	
Mature horses	9,417
Yearling colts	1,174
Spring colts	882
Total	11,473
Value	$1,256,415
Mules—	
Mature mules	855
Yearling colts	142
Spring colts	72
Total	1,069
Value	$148,430
Asses and burros—	
Number	23
Value	$10,077
Swine—	
Mature hogs	22,775
Spring pigs	17,858
Total	40,633
Value	$295,301

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*202 miles of Fresno and 96 miles of Tulare counties were annexed in 1909.

KINGS COUNTY SUMMARY—Concluded.

Sheep—	
Rams, ewes and wethers	40,483
Spring lambs	21,891
Total	62,374
Value	$233,005
Goats—	
Number	507
Value	$1,902
Total value of all domestic animals	$4,426,411
Poultry and bees—	
Poultry of all kinds	102,747
Value	$59,708
Colonies of bees	4,690
Value	$17,630

Principal Crops

Description	Acres	Bushels
Corn	2,274	43,688
Oats	109	4,490
Wheat	8,684	141,978
Barley	19,287	402,432
Kaffir corn and milo maize	3,931	95,010
Dry edible beans	21	576
Potatoes	194	17,658
Hay and forage—	Acres	Tons
Clover alone	13	51
Alfalfa	36,778	123,112
Other tame and cultivated grasses	2,023	2,025
Wild, salt or prairie grasses	833	734
Grains cut green	17,629	28,629
All other hay and forage	473	3,755
Totals	57,749	158,306

Poultry products—	
Poultry raised, number	153,839
Eggs produced, dozens	687,052
Value poultry and eggs produced	$248,495
Honey and wax—	
Honey produced, pounds	238,791
Wax produced, pounds	3,148
Value of honey and wax produced	$12,028
Wool—	
Wool, fleeces shorn	73,393
Mohair and goat hair, fleeces shorn	261
Value of wool and mohair produced	$58,836
Special crops—	
Potatoes, acres	194
Sweet potatoes, acres	19
All other vegetables, acres	674
Sugar beets, acres	504

Orchard fruits—	Number Bearing Trees
Apples	4,106
Apricots	124,007
Cherries	11
Peaches and nectarines	777,697
Pears	4,379
Prunes and plums	132,192
Total	1,042,392
Tropical fruits—	Number Bearing Trees
Figs	391
Oranges	24
Olives	5
Total	420
Grapevines—	
Number in bearing	4,538,732
Small fruits—	
Strawberries, acres	15
Blackberries and dewberries, acres	13
All others, acres	3
Total	31
Nuts—	Number Bearing Trees
Almonds	1,721
Pecans	2
Walnuts	24
Total	1,747

Irrigation

Number of farms irrigated in 1909	1,126
Acres irrigated in 1909	190,949
Acreage enterprises were capable of irrigating in 1910	289,523
Acreage included in projects	310,523
Main ditches, number	27
Length, miles	137
Laterals, number	51
Length, miles	159
Flowing wells, number	75
Pumped wells, number	20
Cost of irrigation enterprises up to July 1, 1910	$687,381
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$2.37

Mineral Production in 1913

Substance	Amount	Value
Gypsum, tons	100	$300
Mineral paint, tons	20	60
Natural gas, thousand	1,916	575
Other minerals	.....	400
Total		$1,335

MADERA COUNTY

Date of creation, March 11, 1893.

			1890	1900	1910
Land area	2,112 sq. miles	Population	....	6,364	8,368
County seat	Madera (city)	Population	....	....	2,404

Population per square mile, 4.0

Storey (Station):			Highest	Lowest
Elevation	296 feet	Temperature (1914)	106	25
Rainfall	....	Snow		....

Madera County is in the center of the San Joaquin Valley, bounded on the north by Merced and Mariposa counties, on the southeast and west by Fresno County, from which it was formed in 1893. The eastern portion of the county extends far up in the Sierra Nevada Mountains. From the foothills to the San Joaquin River, a distance of about forty miles, the land is level and adapted to all kinds of agricultural pursuits. The melting snows of the mountains flow through numerous small creeks into the San Joaquin River, or serve to supply the farming section with water for irrigation. The higher mountains are heavily timbered with valuable wood, principally sugar and white pine. Lumbering, stock raising, quarrying, mining, fruit growing, and farming are the principal industries. There are two large wineries in the county. The power plant of the San Joaquin Light and Power Company is near North Folk, in this county. The granite quarries at Knowles furnish employment to a large number of men.

San Francisco post office and many other public and business buildings in various cities of the State are built of the granite from these quarries.

DAIRYING

The whole of the San Joaquin Valley comprises one of the best known butter producing regions in America. Not only is the output great, but the prices received are higher than in any dairy market. With two big creameries in active operation, the alfalfa acreage ever increasing, the dairy herds growing greatly, Madera County has assumed its proper place in this great butter producing area.

The newest creamery in Madera County was organized last year on a co-operative basis and already is doing an immense business. There is a market for all the

GOLDEN SUNSHINE INSURES ALFALFA'S WONDROUS GROWTH

cream the rancher can obtain and he is paid the highest possible price. Profits beyond the actual running expenses go back into the ranchers' pockets, for that is the pith of the co-operative idea upon which the creamery was organized.

Any person not thoroughly conversant with conditions can scarcely realize what the establishment of a creamery on a sound financial basis means to any community, especially to one where nature has smiled so kindly upon the industry as in Madera County. The grain rancher's return comes to him in a yearly lump after harvest time. The stock raiser's finances are always spasmodic. These men have to carefully plan their monetary affairs and a crop failure or dearth of pasture means serious financial difficulty.

Not so with the man whose stock in trade is an alfalfa farm to furnish feed for a few dairy cows with several hogs as a side issue. Cows, well bred, well fed and cared for can be depended upon for milk of known quality and standard. The dairyman knows to a reasonable certainty what his income will be this month, next month and any month thereafter. He has no worry over finding a market. The market comes to him each day in the shape of the creamery's auto truck, which backs up to his separator house and carts away the well-laden cans of cream.

He knows that on a certain day each month he will receive a check of generous figures. He is sure the bills from the grocer, the butcher and the hardware man will be met and is secure in the knowledge there will be a little surplus for luxuries.

The Madera dairyman's rule of thumb is a ''cow to an acre of alfalfa.'' The well bred cow will in the course of the year produce butter fat worth from $90.00 to $110.00. Some will run higher, but this is a fair average. In addition a calf worth $10.00 to $15.00 when a month old may be expected during the year. Besides the butter fat, the cow will furnish skim milk enough for the basic rations of three hogs. Hogs at one year of age should weigh 200 pounds each and bring $15.00—three hogs at $15.00 each total $45.00. Totalling, the conservative dairyman may figure his income from each acre as follows: Butter fat, $100.00; hogs, $45.00; calf, $15.00; the whole amounting to $160.00. Some have done better, but these figures are given as an average for the successful farmer.

A large area in Madera County is peculiarly adapted to alfalfa growing and alfalfa is the foundation for successful dairying in California. No flattering returns are to be expected from marketing alfalfa hay at the present time under present conditions, but the farmer who figures on feeding his hay to the dairy cow can safely count on a very handsome profit.

In Madera County from five to seven cuttings of alfalfa hay may be reasonably expected with an average yield of one ton of cured hay to the acre for each cutting, provided the farmer is reasonably diligent in his business. Those who are well informed need not be reminded that this yield is 100 per cent greater than the average production of the Eastern and Northern states.

The increased production and acreage of alfalfa in Madera County during the past four years has been phenomenal. The figures of the Horticultural Commissioner for Madera County show 23,000 acres in alfalfa in 1914.

Land suitable for alfalfa can still be obtained here as moderately priced as $75.00, although the average is higher. The entire valley area is suited admirably for irrigation from pumping plants, abundant water lying close to the surface. Part of the county already is under canal and more will certainly follow.

The Madera County Chamber of Commerce feels secure in advising the settler to embark in dairying. With common caution and ordinary care, it is almost impossible to go wrong in this line. There are other dairy regions in California, and Madera invites comparison with them all. Rich soil and cheap water are here. Land prices still are very reasonable. Those who come early will have an advantage over the later arrivals, for the men first on the scene will profit by the rise of values bound to come when a steady stream of settlers forces land prices here to a par with the higher values maintained in other sections.

FIGS

Professor Wickson describes the fig as the grandest fruit tree in California. It grows to enormous size, seemingly lives forever and the older it is the greater its annual production.

The fig requires very little care and attention. It is not attacked by any insect pest, and requires very little pruning. It grows well in many soils, particularly in the light sandy loam soils so common in Madera County. It requires some irrigation and cultivation.

The trees begin to bear after the third or fourth year. The cost of caring for them will be in the neighborhood of forty dollars per acre a year. Land can be had in Madera County, perfectly adapted to figs at $75.00 and up, and the cost of bringing a fig orchard into good bearing conditions, including planting and care will be from $250.00 to $450.00 per acre.

The crop is almost universally dried for marketing and should bring from $100.00 to $160.00 per acre for Black Mission figs, $120.00 to $175.00 per acre for White Adriatic, and from $150.00 to $240.00 per acre for the Calimyrna or California-Smyrna figs, a net profit over and above the cost of care, interest on the investment and taxes from $80.00 to $200.00 an acre.

There is no large area of figs in Madera County, but their success has been demonstrated to a certainty and they are to be recommended without qualification.

OLIVES

The olive is considered one of the longest-lived fruit trees in existence. Trees are still living which were bearing in Palestine when the Christ lived and taught his disciples. An olive orchard is a thing of real beauty and has a peculiar charm. From time immemorial the olive branch has been the symbol of peace and good-will between men.

There is a large area in Madera County peculiarly adapted to olive trees. The climate in the lower valley is adapted as is also the climate of the lower foothills. They thrive best in red, granite, lime and sandy loam soils.

They require cultivation and irrigation and careful pruning and respond gratefully in production to the care given them.

Land perfectly adapted to olives can be had in Madera County at from $25.00 to $200.00 per acre depending on location. A developed orchard in bearing is worth from $400.00 to $700.00 per acre. And practically no olive orchards are for sale, the strongest testimonial as to the attractiveness and thrift of an olive orchard.

The fruit of the olive finds a market in the oil and pickling factories. Pickle olives bring the best returns, and the investor should select varieties and a location assuring a uniform production of pickle olives. S. J. Perkins, W. A. Moore, C. M. Petty and others have demonstrated the success of the olive in Madera County.

RAISINS AND GRAPES

Madera County is seventh of California counties in the production of raisin grapes. It has a large area of soil adapted to the several varieties and its unexcelled sunshine gives it a great advantage in the sugar development and curing of the raisin grape.

Land for raising grapes can be had at from $50.00 to $200.00 per acre depending on location. The cost of planting and bringing a vineyard into full bearing at three years is approximately $150.00. The cultural cost should not exceed twenty dollars per acre, and the net profit over and above all care, interest and taxes should be from $25.00 to $225.00 per acre.

The raisin industry is well organized and the outlook is good for stable prices.

Madera County is also specially adapted to wine grapes and a large acreage is in bearing. The possibility of adverse legislation against the wine industry, however, has done much to discourage the planting of wine grapes in recent years.

Table and shipping grapes have given excellent results and are close rivals of the raisin grapes in profit in ordinary years although the market has not been organized as thoroughly and is not equally dependable.

NUTS

The almond and the English walnut are at home in Madera County. Both are profitable and their culture is comparatively easy and simple.

The almonds are the first to bloom and a late frost is disastrous. Damage to the crop from this cause in Madera County is infrequent, however, especially near and easterly from the line of the State highway.

The soil for almonds should be a sandy loam, not too sandy or gravelly, and should be well drained. Almond land can be had at from $75.00 to $150.00 per acre. Improved almond orchards in bearing should be worth from $250.00 to $500.00 per acre depending upon the favorableness of the location. A profit of from $50.00 to $100.00 per acre should be expected and in exceptional years a much higher figure.

There are no large English walnut groves in Madera County, but small family orchards and scattered trees demonstrate the opportunity for this attractive and profitable nut. They promise well in the foothills as well as the valley lands. Grafted on the native black walnut root, the English walnut is immune from pest or climatic injury.

Undeveloped land for walnuts can be had for from $25.00 to $250.00 per acre. The cost of bringing an orchard into bearing may vary between $75.00 and $150.00 exclusive of interest and taxes. The average net annual income should not be less than $75.00 per acre and may run very much higher.

MADERA COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	......
3 to 9 acres	13
10 to 19 acres	21
20 to 49 acres	76
50 to 99 acres	23
100 to 174 acres	151
175 to 259 acres	27
260 to 499 acres	66
500 to 999 acres	59
1,000 acres and over	137
Total	573
Total in 1900	523

Land and Farm Areas

Approximate land, acres	1,351,680
Land in farms in 1910	620,663
Land in farms in 1900	484,659
Improved land in farms in 1910	391,086
Improved land in farms in 1900	277,721
Woodland in farms	41,612
Other unimproved land	187,965

Value of All Farm Property.

Total value in 1910	$14,984,395
Total value in 1900	5,916,894
Per cent increase 1900-1910	153.3
Land in 1910	12,263,638
Land in 1900	4,588,770
Buildings in 1910	771,595
Buildings in 1900	433,050
Implements and machinery in 1910	441,455
Implements and machinery in 1900	214,100
Domestic animals, poultry and bees in 1910	1,507,707
Domestic animals, poultry and bees in 1900	680,974

Domestic Animals on Farms and Ranges.

Cattle*—	
Dairy cows	1,592
Other cows	12,406
Yearling heifers	2,425
Calves	2,975
Yearling steers and bulls	2,252
Other steers and bulls	3,946
Total	25,596
Value	*$582,792
Horses—	
Mature horses	3,498
Yearling colts	334
Spring colts	238
Total	4,070
Value	$386,856
Mules—	
Mature mules	2,928
Yearling colts	154
Spring colts	59
Total	3,141
Value	$454,606
Asses and burros—	
Number	49
Value	$9,301
Swine—	
Mature hogs	4,444
Spring pigs	2,409
Total	6,853
Value	$36,151
Sheep—	
Rams, ewes and wethers	6,269
Spring lambs	3,837
Total	10,106
Value	$23,145
Goats—	
Number	278
Value	$717
Total value of all domestic animals	$1,493,568
Poultry and bees—	
Poultry of all kinds	23,246
Value	$13,024
Colonies of bees	375
Value	$1,115

Principal Crops

Description	Acres	Bushels
Corn	1	50
Oats	10,569	175,047
Wheat	39,468	370,499
Barley	90,341	1,170,945
Kaffir corn and milo maize	343	4,948
Dry edible beans	15	333
Potatoes	75	6,662
Hay and forage—	Acres	Tons
Timothy alone	5	6
Alfalfa	5,735	16,717
Other tame and cultivated grasses	60	73
Wild, salt or prairie grasses	516	423
Grain cut green	11,283	12,757
All other hay and forage	7	2
Total	17,606	29,978

Poultry products—	
Poultry raised, number	28,137
Eggs produced, dozen	67,932
Value of poultry and eggs produced	$29,336
Honey and wax—	
Honey produced, pounds	16,439
Wax produced, pounds	370
Value of honey and wax produced	$1,052
Wool—	
Wool fleeces shorn	4,905
Mohair and goat hair, fleeces shorn	60
Value wool and mohair produced	$2,272
Special crops—	
Potatoes, acres	75
Sweet potatoes, acres	2
All other vegetables, acres	256
Orchard fruits—	Number Bearing Trees
Apples	20,576
Apricots	9,408
Cherries	40
Peaches and nectarines	40,989
Pears	1,185
Prunes and plums	7,570
Total	79,768

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*Includes animals, age or sex not specified.

MADERA COUNTY SUMMARY—Concluded.

	Number Bearing Trees
Tropical fruits—	
Figs	4,321
Lemons	15
Oranges	184
Pomelos	2
Olives	18,010
Total	22,532
Grapevines—	
Number in bearing	1,530,630
Small fruits—	
Strawberries, acres	2
Blackberries and dewberries, acres	3
All others, acres	2
Total	7

	Number Bearing Trees
Nuts—	
Almonds	2,778
Pecans	5
Walnuts	14
Total	2,797

Irrigation

Number of farms irrigated in 1909	158
Acres irrigated in 1909	38,705
Acreage enterprises were capable of irrigating in 1910	51,230
Acreage included in projects	82,321
Main ditches, number	34
Length, miles	79
Laterals, number	30
Length, miles	294
Pumped wells, number	33
Cost of irrigation enterprises up to July 1, 1910	$512,098
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$10.00

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	315	$1,650
Copper, pounds	532,403	82,522
Gold		14,489
Silver		1,617
Stone industry		271,589
Total		$371,867
Number of mineral springs		10

MARIPOSA COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	1,463 sq. miles	Population	3,787	4,720	3,956
County seat, Mariposa (twp)		Population	697	1,009	654

Population per square mile, 2.7

Yosemite (Station):			Highest	Lowest
Elevation	3,945 feet	Temperature (1914)	110	0
Rainfall	32.83 inches	Snow	90.5 inches	

This county reaches eastward from the edge of the San Joaquin plains across the foothills far into the Sierra Nevada Mountains, its altitude varying from 300 to 13,000 feet, Mount Dana, the highest point of land, reaching an elevation of 13,627 feet.

There are about 300,000 acres of plains and lower foothills together, the latter predominating, and the balance consists of high hills and mountains; bare of timber on the plains, then scattering oak and scrub pines, then rising to immense tracts of sugar and yellow pine, fir, spruce and cedar, and the giant sequoias of Mariposa Big Tree Grove, which contains some 427 trees, many of 35 feet in diameter and 150 to 300 feet high. The county is well provided with natural water in the Merced, Mariposa and Chowchilla rivers. The famous Yosemite Valley is located in the eastern part of this county, at an elevation of 4,060 feet, with walls 5,000 feet higher. The Merced River flows through the valley.

Mariposa County is noted on account of its yield of gold from its quartz veins and placers, and this industry will rank first for years to come.

There are three mining belts in the county — the Mother Lode with its offshoots, the east belt, and the copper belt.

Irrigation is practiced to some extent, water being taken from streams and mining ditches, and used with good results.

Lumbering is of considerable importance, the splendid forests of pine and fir being extensive.

Stock raising is a thriving enterprise. The cattle and sheep are ranged in the mountains in the summer and in the valleys and plains during the winter.

AGRICULTURE AND HORTICULTURE

Old-time Mariposa optimists, and there are many of them, assert that there is as much mineral wealth still remaining in the county's hills as has been taken out and it may be true but the younger generation is rapidly coming to the conclusion, through experience, that the surest gold yet remaining will come to the surface in the form of luscious fruit, delicious vegetables, grain, hay and stock. The county is rapidly waking up to its possibilities along these lines and more acreage is being devoted each year to agriculture and horticulture.

There is no doubt but that the growing of citrus fruits will some day be one of the county's greatest industries. In the lower part of the county at an elevation of 300 to 700 feet there is a reach of territory, about ten miles wide and stretching across the county from north to south, a distance of about 30 miles, where no orange tree has been planted that has not grown and thriven wonderfully, bearing a golden harvest that is unexcelled for size and flavor. It is well known that at this elevation oranges do better and are less subject to climatic changes than in the lower valleys. Here they are above the frost belt and below the snow line. This is at practically the same elevation as, and is a continuation of, the Sierra foothill belt that grows such marvelous crops of oranges at Oroville to the north, and Porterville to the south. Oranges today are growing with remarkable success near Hornitos, in the Cathey Valley, and in the White Rock region in this county. They require irrigation, but not so much as in many citrus regions of California because Mariposa is exceptionally favored in the matter of rainfall. Furthermore, as has been shown, such irrigation as may be necessary is comparatively easy of accomplishment in one form or another because of the number of streams, the multiplicity of springs susceptible of further development and the feasibility of water production by pumping. Lemons, limes and pomelos can also be grown here, but oranges will some day surely be one of Mariposa's leading crops.

In this same general region but extending a little higher into the hills are some of the oldest and finest fig trees in the State, bearing profusely. All varieties of grapes, the table, the raisin and the wine, find a natural home in these sunny hills and they can be raised much higher in the mountains. One of the finest olive orchards in the State lies between Mariposa and Hornitos; another large olive orchard lies in Horse Shoe Bend on the Merced River. The olive is a long-lived tree and profitable. The pear is a good grower in this county, too little attention having been paid to it thus far. The Bartlett pear especially has proven to be a most prolific variety, raising from 300 to 800 boxes per acre. The pear also grows at a considerable altitude, gaining color and keeping qualities from the pure mountain air. Pear blight is unknown.

But the apple is Mariposa's leader. Great, luscious, beautifully colored apples in abundance prove Mariposa's claim to being one of the best apple counties in the State. The best apple regions lie at an altitude of 2,000 to 4,000 feet and this variance in altitude permits of thousands of acres in numberless valleys being adaptable to their growth. Some of the coast counties raise many apples but none of them equal the Mariposa mountain apple in flavor and staying qualities. No irrigation is necessary. The winters supply plenty of rainfall and the summers are dry, causing the fruit to ripen and color beautifully with an aroma and taste unsurpassed. The apple not only grows naturally here but it lives long; apple orchards 50 years old are still bearing abundantly.

While apples grow all over the county, except in the most elevated regions, there is a district known as Jerseydale which makes a specialty of their production. It consists of a succession of small valleys at an elevation of 3,000 to 4,000 feet, taking its name from its postoffice. Although well up in the mountains and having no central town, it is filled with small, comfortable farms and orchards. The people raise other fruits, but the apple is king of the region. It is one of the prettiest sections of the county and one of the busiest during the apple harvest. It is difficult to say just what variety of apple is the favorite or does the best.

In the matter of vegetables, Mariposa raises a considerable variety for her own people, demonstrating her possibilities, but ships but little out except potatoes. The Irish potato grows and yields exceedingly well and owing to the quality of the soil and the altitude her potatoes are wonderful keepers, standing long shipments without deterioration.

DAIRYING OPPORTUNITIES

Much hay is raised in the lower part of the county,

CALIFORNIA'S WEALTH OF TIMBER LAND IS UNTOLD it being estimated that 12,000 acres were cut to hay in 1914. Alfalfa grows abundantly wherever there is irrigation, but the hay mainly raised is oat or barley, with a sprinkling of wheat. The ordinary Indian field corn is a great producer.

Corn, 11 to 12 feet high, grown entirely without irrigation, is a common sight. Very little wheat is raised; barley, the great California horse feed, being most common in the lower elevations.

One of the remarkable features of the county is the native feed or grasses, there being no less than fifteen different classified varieties and all excellent stock feed.

TIMBER

Above the lower elevations the county is heavily wooded, thus adding to its climatic desirability and its natural beauty. Throughout the center of the county, massive oaks abound while higher up are great forests of pine, spruce, fir and cedar. In the northwestern part of the county, just on the edge of the Yosemite National Park are thousands of acres of the finest pine timber, over 60 per cent being sugar pine, the best natural building timber in the world. Immense logs from this forest are carried through the hills on freight cars, lowered into Merced Canyon on an 8,000-foot tramway and conveyed by the Yosemite Valley Railroad to Merced Falls, just over the county line, where they are manufactured into lumber at one of the largest plants on the Coast, having a capacity of 300,000 feet a day. Away off to the south stretch these illimitable virgin forests.

MARIPOSA COUNTY SUMMARY

Number of Farms Classified by Size

3 to 9 acres	1
10 to 19 acres	4
20 to 49 acres	4
50 to 99 acres	21
100 to 174 acres	97
175 to 259 acres	15
260 to 499 acres	101
500 to 999 acres	51
1,000 acres and over	36
Total	330
Total in 1900	381

Land and Farm Areas

Approximate land, acres	936,320
Land in farms in 1910	206,059
Land in farms in 1900	160,156
Improved land in farms in 1910	37,017
Improved land in farms in 1900	14,003
Woodland in farms	85,150
Other unimproved land	83,892

Value of All Farm Property

Total value in 1910	$2,829,235
Total value in 1900	1,328,151
Per cent increase 1900-1910	113.0
Land in 1910	1,817,100
Land in 1900	752,090
Buildings in 1910	276,180
Buildings in 1900	207,640
Implements and machinery in 1910	79,403
Implements and machinery in 1900	59,960
Domestic animals, poultry and bees in 1910	656,552
Domestic animals, poultry and bees in 1900	308,461

Domestic Animals on Farms and Ranges

Cattle*—	
Dairy cows	905
Other cows	7,477
Yearling heifers	1,602
Calves	2,115
Yearling steers and bulls	1,683
Other steers and bulls	2,876
Total	16,658
Value	*$370,521
Horses—	
Mature horses	1,896
Yearling colts	218
Spring colts	126
Total	2,240
Value	$182,986
Mules—	
Mature mules	201
Yearling colts	46
Spring colts	49
Total	296
Value	$30,565
Asses and burros—	
Number	83
Value	$10,183
Swine—	
Mature hogs	6,160
Spring pigs	2,722
Total	$46,704
Sheep—	
Rams, ewes and wethers	877
Spring lambs	304
Total	1,181
Value	$4,409
Goats—	
Number	931
Value	$2,365
Total value all domestic animals	$647,733
Poultry and bees—	
Poultry of all kinds	12,217
Value	$8,668
Colonies of bees	34
Value	$151

Principal Crops

Description	Acres	Bushels
Corn	174	2,330
Oats	55	1,100
Wheat	124	1,298
Barley	1,434	19,130
Dry edible beans	62	409
Potatoes	76	8,537
Hay and forage—	Acres	Tons
Timothy alone	65	100
Timothy and clover mixed	29	34
Clover alone	25	6
Alfalfa	28	97
Other tame and cultivated grasses	177	223
Wild, salt, or prairie grasses	685	659
Grains cut green	5,472	4,884
All other hay and forage	40	46
Total	6,521	6,049

Poultry products—	
Poultry raised, number	19,583
Eggs produced, dozens	49,728
Value poultry and eggs produced	$28,844
Honey and wax—	
Honey produced, pounds	300
Wax produced, pounds	25
Value of honey and wax produced	$51
Wool—	
Wool, fleeces shorn	355
Mohair and goat hair, fleeces shorn	154
Value wool and mohair produced	$376
Special crops—	
Potatoes, acres	76
All other vegetables, acres	193

Orchard fruits—	Number Bearing Trees
Apples	16,001
Apricots	233
Cherries	120
Peaches and nectarines	1,618
Pears	701
Prunes and plums	762
Total	19,461

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*Includes animals, age or sex not specified.

MARIPOSA COUNTY SUMMARY—Concluded.

	Number Bearing Trees
Tropical fruits—	
Figs	461
Lemons	35
Oranges	1,169
Pomelos	1
Olives	2,711
Total	4,378
Grapevines—	
Number in bearing	28,647
Small fruits—	
Strawberries, acres	1
Blackberries and dewberries, acres	2
All others, acres	4
Total	7

	Number Bearing Trees
Nuts—	
Almonds	159
Walnuts	91
Total	262

Irrigation

Number of farms irrigated in 1909	56
Acres irrigated in 1909	376
Acreage enterprises were capable of irrigating in 1910	546
Acreage included in projects	767
Main ditches, number	49
Length, miles	21
Pumped wells, number	2
Cost of irrigation enterprises up to July 1, 1910	$13,440
Average cost per acre irrigation enterprises were capable of irrigating in 1910	24.62

Mineral Production in 1913

Substance	Amount	Value
Copper, pounds	416,031	$64,485
Gold	......	171,034
Silver	......	7,430
Other mineral	......	3,130
Total		$246,079
Number of mineral springs		4

MERCED COUNTY

Date of creation, April 19, 1855.

			1890	1900	1910
Land area	1,995 sq. miles	Population	8,085	9,215	15,148
County seat	Merced (city)	Population	2,009	1,969	3,102
	Population per square mile, 7.6				
				Highest	Lowest
Elevation	173 feet	Temperature (1914)		106	26
Rainfall	14.72 inches	Snow		....	

Almost in the center of the State and a little north of the center of the San Joaquin Valley, lies the county of Merced, extending from the lower foothills of the Sierra Nevada Mountains on the east to the summit of the easternmost ridge of the Coast Range on the west.

The county seat is located at the city of Merced, a growing town of 5,000 inhabitants, located about the center of the eastern half of the county.

TOPOGRAPHY AND SOIL

With the exception of a few low, rolling hills in its eastern confines and about four hundred square miles of similar but more elevated hills in the Coast Range lying in the west, the county is almost level. The San Joaquin River flows through the county in a northerly direction, dividing it into two nearly equal parts. The Merced River rising in the Sierra Nevada Mountains, flows through the world-known Yosemite Valley, traverses the eastern half of the county in a westerly direction and empties into the San Joaquin. Three smaller streams have the same general courses and outlets south of the Merced, while on the west side of the county, three small creeks bring much winter water into the county from the Coast Range. As the average annual rainfall of Merced is twelve inches, the county is as well watered from natural causes as any county in the San Joaquin Valley.

Nearly all the 1,280,000 acres in the county are cultivable and the greater part of the balance furnish stock pasturage during a portion of the year. The U. S. census says that 91 per cent of Merced's acreage is ''land in farms'' which is a remarkably high percentage of this nature. Centuries of granite erosion in the mountains and the carrying capacity of the streams have produced a deep, rich, loamy soil that is fertile in the highest degree. The soil varies in texture, being lighter and more friable in the northern portion of the county and shading off to a heavier, darker loam in the soil but it is nearly all deep and remarkably fertile, the variance in the soil but serving to increase the diversity of product which is one of the most important characteristics of the county.

IRRIGATION A FACTOR

Nowhere in the world has artificial irrigation reached a higher stage of development than in the San Joaquin Valley and in no part of the valley have its benefits been more fully exemplified than in Merced County. Four large gravity irrigation systems are today irrigating upwards of 150,000 acres of land in the county and such arrangements are now being made that within a reasonable period of time, gravity irrigation will doubtless be largely increased through formation of new systems or extension of those existing.

Furthermore, throughout the greater portion of the county, an inexhaustible supply of water is found at a reasonable distance below the surface and irrigation by pumping is growing in favor, the power being supplied by electricity or gasoline. When irrigation was first introduced into California, it encountered some prejudice but experience showed that the only evils resultant upon its use were because of the faults of the irrigator and not of the water. Time has corrected these few faults and today there is no prejudice because it has been amply proven that proper irrigation, in a land where rain falls during half the year only, insures continuity of production and increases the yield and variety of crops, making the land more valuable and leading to subdivision of large tracts.

DIVERSITY OF PRODUCTS

Merced County was once an immense pasture; later a great portion of its territory was devoted to grain growing; then came irrigation and subsequent subdivision of many large farms. There is still much stock-raising and grain is grown in abundance, but where irrigation is practiced small farms are the rule and fruit-growing, vegetable-raising and dairying reign supreme. The county is not dependent upon the returns from one or two varieties of produce. On the contrary, its various crops maturing throughout the year, the income of its rural population is distributed accordingly. The fertility

INLAND WATERWAYS—GREAT AVENUES OF TRADE

of its soil and the variety of its product is illustrated by the fact that figures from the various county shipping points show that in the matter of fruits, the county shipped about fifteen different varieties during the year in commercial quantities. The leading fruit is the grape, with peaches second, and figs third. Nearly 6,000 acres are devoted to grapes; bearing peach trees number 260,000 and 390,000 more will be in bearing within two or three years. It has been demonstrated that Merced County soil is naturally adapted to the raising of the finest Asiatic figs and 45,000 trees are now growing.

The leading vegetable is the sweet potato, Merced raising more than any other community in the world; over 21,500,000 pounds being shipped last year from approximately 2,800 acres. The second vegetable in production is the tomato; egg plants grow profusely and bring high prices. Other vegetables annually shipped to market are thousands of pounds each of at least ten different varieties. Merced County vegetables are well known as among the earliest in the State and their sale prices range accordingly.

Fruit is destined to be Merced County's great product. The fertile soil combined with irrigation causes trees and vines to grow rapidly and luxuriantly and to yield large, well-formed fruit in abundance, while the cloudless summer days ripen it perfectly, giving it incomparable lustre, aroma and taste. Neighborhood experiences go far in determining a suitable crop for the land, and in addition, the agricultural department of the State University will analyze any soil an owner may send to it and give valuable advice as to what variety of crop it will best produce. The new comer who may have a preference for a particular crop should exercise the greatest care in selecting a soil fitted for that production, for otherwise he may meet with future disappointment.

Grapes and peaches are the principal fruits raised in Merced County but it has been demonstrated that a great area in the county is especially adapted to the fig and the acreage devoted to its growth is being annually augmented. We raise the purple Mission fig, the white Adriatic and the famous Merced-Smyrna white fig, the latter especially meeting with highest market favor. The man who buys the right land in this county and plants figs makes no mistake, for California is practically the only fig state in the Union; the average annual consumption of dried figs in the United States for the last ten years has been 12,100 tons, yet only about one-fourth of that amount is produced in California, about a million dollars worth being annually imported from Turkey. Figs are not mentioned in the University tables from which we have made extracts, but a special article in the circular states that averaging the good and poor seasons together, they may be expected to produce somewhat as follows: Mission, 2½ to 3½ tons per acre; Adriatic, 2 to 2½ tons; Smyrna 1½ to 2 tons; also that under present conditions the grower may receive from the packers, for the Mission two cents, for Adriatic three and a half cents, and for the Smyrna five to six cents per pound on a sweat-box basis.

Another crop not mentioned in the University circular and therefore meriting especial mention here because it is our leading vegetable, is the sweet potato. Merced County is justly proud of its sweet potatoes for it raises more of them than any other similar community. Aside from our large home consumption, we shipped last year 21,500,000 pounds of "Merced Sweets" which have a market name of their own and always meet with ready sale. The cost of planting, cultivating and harvesting an acre of sweet potatoes runs from $25 to $30. Many yields are reported of 20,000 pounds to the acre but a very conservative estimate of the average yield is from 10,000 to 12,000 pounds. The average selling price is a cent a pound. It will be seen that the net return has reached $150 to $175 an acre, but a very low estimate gives $75 to $100 an acre.

One of the profitable pursuits in this county is tomato growing, almost 2,000,000 pounds being shipped last year. Merced County is exceptionally favored in this industry because its season is early. There is but one earlier district in the State and it is much farther from the great San Francisco market than Merced. Good prices are therefore the usual result.

The egg plant is a splendid producer but requires considerable care and expense in raising. Five to six hundred dollars an acre is estimated as the annual cost of cultivating and harvesting but the vines continue producing from July to December and the gross sales have averaged from $1,000 to $1,200 per acre.

DAIRYING

Alfalfa is a sure money-maker. It will grow in abundance in almost every part of the county where water can be artificially applied to the soil and many excellent stands of alfalfa have had no other water than the natural rainfall after the second year. An alfalfa grower has a great variety of choice in the matter of extending the ramifications of his business. He may cut and sell the hay alone, five or six crops a year, at a profit, or he can make more money by keeping a few good dairy cows, feeding solely on the alfalfa. There are two large creameries in the county, making thousands of pounds of butter; there is a cream pasteurizing plant shipping sweet cream to the San Francisco tables; in addition, every town, however small, has from one to half a dozen cream receiving stations. Best of all, the dairymen get checks for their cream at least once a month, usually twice a month. The dairymen should always have calves to sell to the butcher and also hogs, because the hogs like alfalfa and use up his skimmed milk.

POULTRY AND BEES

A few swarms of bees yield rich returns in honey and beeswax. The bees of one of the most successful apiarists in the county have no other feed than his alfalfa blossoms. Chickens eat alfalfa and the insects in the field. Nearly every dairyman keeps a few chickens. He has poultry and eggs for his own table and although he may not go into the business extensively he can usually sell enough to the town stores to keep his family in groceries.

However, the exclusive poultry business is profitable. There are many large poultry farms in the State and yet California imports thousands of dozens of eggs annually. There is no more ideal place in the State than Merced County for this business, because of its climate. One of our most successful growers estimates that in one year his hens cost him $1.50 each for feeding. The average number of eggs per hen was 155, which he sold at an average net rate of 29 cents per dozen, making the profit about $2 per hen for the year. Turkeys are also profitable seven-months' old birds being salable at Thanksgiving and Christmas for $2.50 to $4 apiece. The keeping of hens is especially recommended to the fruit grower, during the years he is waiting for his trees to come into commercial bearing.

Other crops might be mentioned in this connection but enough has been said to show that the farmer, the horticulturist and the dairyman of this county can make money and they do make it. Nor need one have fear of the markets being overstocked. The cities of this State are growing by leaps and bounds and the people of these growing cities must be fed. For years the State has been importing and continues to import immense quantities of many of the products we have mentioned. Furthermore California must supply to the great arid region west of the Rockies many varieties of food which that territory can not grow. Our fruits are being shipped east at the rate of thousands of carloads a year and the Eastern market is continually widening. Do not fear over-production.

Dairying is a most important industry. Alfalfa is grown in almost every region in the county, but mainly west of the San Joaquin River. The area devoted to this forage plant approximates 76,800 acres and the annual sale of milk, cream, butter and cheese, to say nothing of such by-products as hogs and calves, is really enormous.

When is added to the fruits, vegetables and dairy produce, the county's annual market output of live and dressed beef and mutton, hogs, hay, barley, wheat, Egyptian and Indian corn, oats, rye, wool, honey, poultry and eggs, it will be patent to the most casual reader, that in fertility of soil and variety of product, Merced County is exceptionally favored.

Merced County is first among the fifty-eight counties of California in sweet potato product and first in its number of cattle; it is second in value of domestic animals and second in quantity of butter fat sold.

CLIMATE AND HEALTH

Merced's climate is equable which makes for health. The U. S. Weather Bureau gives the following as its average temperature: Winter, 49 deg.; spring, 61 deg.; summer, 79 deg.; fall, 65 deg.; general average for the year, 63 deg. Great extremes of heat or cold are unknown. There is an occasional light frost in the so-called "winter," but no ice, sleet, nor snow. There are usually a few days in summer much warmer than the stated average temperature but the heat is dry and any physician knows that a temperature of 100 degrees in a dry climate is less oppressive and far more healthful than a temperature of 90 degrees in a humid atmosphere. Men work in Merced's fields every summer day without fear of sunstroke. Our summer winds are salubrious, and agreeable, never rising to the fury of a tornado. Rains occur at intervals from October to April; with the exception of an occasional sprinkle, no rain falls from May to September. Thunder and lightning are so rare as to be curiosities.

MERCED COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	1
3 to 9 acres	86
10 to 19 acres	213
20 to 49 acres	694
50 to 99 acres	295
100 to 174 acres	165
175 to 259 acres	46
260 to 499 acres	89
500 to 999 acres	100
1,000 acres and over	167
Total	1,856
Total in 1900	999

Land and Farm Areas

Approximate land, acres	1,276,800
Land in farms in 1910	1,162,167
Land in farms in 1900*	1,702.967
Improved land in farms in 1910	607,742
Improved land in farms in 1900	613,376
Woodland in farms	49,818
Other unimproved land	504,607

Value of All Farm Property

Total value in 1910	$49,520,913
Total value in 1900	22,636,859
Per cent increase, 1900-1910	118.8
Land in 1910	40,047,324
Land in 1900	18,449,650
Buildings in 1910	2,338,587
Buildings in 1900	984,040
Implements and machinery in 1910	804,625
Implements and machinery in 1900	501,480
Domestic animals, poultry and bees in 1910	6,330,377
Domestic animals, poultry and bees in 1900	2,701,689

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*By an error the acreage was reported in 1900 as 1,702,967 instead of 1.666.973.

SEASIDE PLEASURES
EVERY CALIFORNIAN MAY ENJOY

MERCED COUNTY SUMMARY—Concluded.

Domestic Animals on Farms and Ranges

Cattle†—	
Dairy cows	19,678
Other cows	43,250
Yearling heifers	14,858
Calves	14,625
Yearling steers and bulls	11,036
Other steers and bulls	34,767
Total	138,214
Value	†$4,343,845
Horses—	
Mature horses	10,308
Yearling colts	1,453
Spring colts	795
Total	12,556
Value	$1,063,537
Mules—	
Mature mules	3,673
Yearling colts	198
Spring colts	204
Total	4,075
Value	$482,209
Asses and burros—	
Number	107
Value	$17,432
Swine—	
Mature hogs	19,414
Spring pigs	10,121
Total	29,535
Value	$185,474
Sheep—	
Rams, ewes and wethers	28,044
Spring lambs	11,724
Total	39,768
Value	$152,708
Goats—	
Number	5,246
Value	$21,272
Total value all domestic animals	$6,266,477
Poultry and bees—	
Poultry of all kinds	83,998
Value	$51,943
Colonies of bees	4,072
Value	$11,957

Principal Crops

Description	Acres	Bushels
Corn	1,877	52,778
Oats	19,843	338,041
Wheat	10,399	115,938
Barley	88,145	2,009,531
Kaffir corn and milo maize	2,206	45,770
Dry edible beans	523	5,839
Potatoes	246	18,882
Hay and forage—	Acres	Tons
Timothy alone	5	7
Clover alone	79	317
Alfalfa	37,842	144,357
Other tame and cultivated grasses	784	680
Wild, salt or prairie grasses	10,308	7,228
Grains cut green	19,751	20,293
All other hay and forage	148	453
Total	68,917	173,335

Poultry products—	
Poultry raised, number	136,305
Eggs produced, dozens	454,115
Value poultry and eggs produced	$184,810
Honey and wax—	
Honey produced, pounds	204,098
Wax produced, pounds	3,150
Value of honey and wax produced	$10,993
Wool—	
Wool, fleeces shorn	46,908
Mohair and goat hair, fleeces shorn	8,400
Value wool and mohair produced	$39,400
Special Crops—	
Potatoes, acres	246
Sweet potatoes, acres	2,114
All other vegetables, acres	380
Sugar beets, acres	2
Orchard fruits—	Number Bearing Trees
Apples	8,941
Apricots	7,381
Cherries	343
Peaches and nectarines	134,991
Pears	5,704
Prunes and plums	5,401
Total	162,761
Tropical fruits—	Number Bearing Trees
Figs	9,837
Lemons	209
Oranges	1,572
Pomelos	11
Olives	6,981
Total	18,610
Grapevines—	
Number in bearing	1,281,342
Small fruits—	
Strawberries, acres	5
Blackberries and dewberries, acres	21
All others, acres	8
Total	34
Nuts—	Number Bearing Trees
Almonds	17,132
Pecans	31
Walnuts	633
Total	17,796

Irrigation

Number of farms irrigated in 1909	1,417
Acres irrigated in 1909	151,998
Acreage enterprises were capable of irrigating in 1910	248,670
Acreage included in projects	281,719
Main ditches, number	45
Length, miles	261
Laterals, number	353
Length, miles	352
Flowing wells, number	29
Pumped wells, number	78
Cost of irrigation enterprises up to July 1, 1910	$3,748,211
Average cost per acre irrigation enterprises were capable of irrigating in 1910	15.07

Mineral Production in 1913

Substance	Amount	Value
Copper, pounds	19,240	$2,982
Gold‡	.....	2,255
Silver‡	.....	92
Stone industry	.....	30,000
Total		$35,329

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†Includes animals, age or sex not specified.

‡Production from dredging operation included in Stanislaus County.

SAN JOAQUIN COUNTY

Date of creation, February 18, 1850.

		1890	1900	1910
Land area....1,448 sq. miles	Population,	28,629	35,452	50,731
County seat, Stockton (city)	Population,	14,424	17,506	23,253

Population per square mile, 35.0

Assessed valuation of county, 1914-15, $60,638,988

		Highest	Lowest
Elevation....... 24 feet	Temperature (1914)...	102	30
Rainfall........16.25 inches	Snow................	....	

San Joaquin County lies at the northern and lower end of the San Joaquin (pronounced "Wah Keen") Valley. It occupies the center of the State east and west, and Stockton, the county seat, is nearly due east of the Golden Gate. The county has an average length of forty miles north and south with an average width of thirty miles.

RIVERS

Two rivers—the Mokelumne and the Calaveras—flow into the county from the east, and a third—the Stanislaus—flows along the southern boundary. Crossing the county from east to west is the San Joaquin River, which draws the whole southern line of the main valley itself and receives the flow of the other rivers above mentioned. Nearly all the land is level and suited to agriculture.

SOILS

Along the rivers are rich sedimentary bottoms adapted to every type of agriculture. Much of this land had to be reclaimed but when completed this soil is as rich as that of any of the world.

There are four types of soil in the county—the peat or river bottom land, the adobe, the sandy and the sedimentary loam. These types blend with one another and run together gradually so that with the many modifications there is a great difference between soils even on neighboring lands.

The peat soils are rich and productive, used largely for truck gardening. The adobe soils are very fertile, but more difficult of cultivation, used largely for the production of grain. The sandy soils require an abundance of water. They are easily worked and highly productive. They are lacking in strength and will not stand continuous annual cropping without fertilization. This type of soil is used in growing alfalfa and the raising of hogs, chickens and in dairying. The sandy loam soils are considered the best on account of their productiveness and the ease with which they may be worked. It is on this type of soil that most of the valuable fruit orchards are to be found.

Alkali and hardpan are found in some parts of the county and should be guarded against, although they are not detrimental over a very large area.

IRRIGATION

The lands of the county have been largely farmed without the help of water until within the last few years. The increased yields which has followed as a result of the application of water in certain parts has

SUN-DRIED FRUIT—CALIFORNIA'S FAME

resulted in the boring of wells and the installation of pumping plants in all parts of the county. Two municipal water districts have been formed in the southeastern part and two private canal companies, one known as the Woodbridge District, and the other for the purpose of irrigating an area in the bottom lands just north of Tracy. The South San Joaquin Irrigation District, with headquarters at Manteca, has been formed. The water being supplied from the Stanislaus River. This district includes some 70,000 acres. Much improvement is going on here at the present time and a great deal of land is being placed under irrigation. In addition to the irrigation through canals and by private pumping plants another method obtains in the Delta Region. Here the land is sub-irrigated.

CLIMATE

The climate is well adapted to the different phases of farming. There are no marked changes between the night and day or winter and summer. The changes are mostly of a gradual nature. There are two seasons, the wet and the dry, or what is known as the rainy and the warm or growing season. Thunder showers and frost are rare.

RAINFALL

The rainfall varies in the different parts. On the west side, at Tracy, the average is about ten inches a year. At Lodi, in the northern part, the average is from eighteen to nineteen inches a year, and through the central part about sixteen inches.

CROPS

The crops of the county are of great variety and the returns equal to that of other favored portions of the State.

Alfalfa produces the maximum crop under favorable conditions, as a result dairying, hogs and poultry raising are a very profitable industry. Beans, celery, asparagus, chicory, barley, wheat, rye, oats, onions, potatoes, tomatoes, grapes, peaches, apples, cherries, figs, watermelons, cantelopes, olives, oranges, apricots, plums, pears, almonds and walnuts are quite extensively and profitably grown in the different sections.

MANUFACTURING

Manufacturing of the county centers largely about the city of Stockton, the county seat. Stockton is excellently situated for factories of almost any kind, and particularly so for such factories as use raw materials from the farm or whose products are for use on the farm. In other parts of the county there are scattering establishments manufacturing various sorts of products.

Stockton, the manufacturing center, is located at the point where railroad and water transportation come together, four transcontinental railroads competing for the business. The fact that the whole county has excellent transportation facilities and is situated in the center of the State, makes it apparent that this county will continue to be a leading manufacturing center.

FACTORIES

Stockton has become a great center for the production of agricultural implements, traction and gas engines, irrigation plants, pumps, combined harvesters, dredgers, sheet metal and iron work. Large flour mills and cereal food manufactories are located here. In addition to the above, Stockton supports a large glass factory, a large foundry, a wool scouring plant, brick yards, planing mills, three creameries, a winery, a fruit cannery, a bean cannery, and several other similar industries. At Lodi is a large basket factory, several producers of irrigation pipes, a fruit juice factory, canneries, wineries and fruit packing houses. At Woodbridge a grape tartar factory, and near French Camp a factory for grinding and roasting chicory for the market, besides several other establishments in other parts of the county.

HIGHWAYS

Macadamized roads radiate in all directions from Stockton, reaching to all parts of the county as well as up and down the great interior valleys, and to the cities located around San Francisco Bay. Stockton is on the main line of the Southern Pacific, Santa Fe, Western Pacific railroads and the California Traction Company, Stockton Terminal and Eastern and Tidewater and Southern Electric lines.

Stockton is one of the modern, up-to-date cities of the coast, with a population of about 40,000. Good schools of all grades, churches of all denominations, good electric lighting system with plenty of electric power at a low cost, fine streets, theatres, excellent hotels, a large Public Library, beautiful homes, grand automobile boulevards, a progressive and prosperous people, make Stockton one of the attractive cities either for a home or for an investment.

SCHOOLS

The county has an excellent school system supporting eighty-nine grammar schools, four union high schools, besides a large and well equipped high school in the city of Stockton, a normal institute, two commercial schools, besides several parochial schools.

CHURCHES

Churches of all denominations are represented in the city of Stockton and in the different parts of the county, nearly every one supports large congregations and have beautiful church buildings.

TOWNS

There are many towns scattered throughout the county, either on the macadamized county highways or on the line of one or the other of the many railroads, Lodi being the largest town outside of Stockton, with a population of some 4,000. Tracy supports a population of over 2,000.

A study of the statistical report which follows will show that San Joaquin County is one of the productive, prosperous counties of the State.

SAN JOAQUIN COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	9
3 to 9 acres	204
10 to 19 acres	531
20 to 49 acres	797
50 to 99 acres	397
100 to 174 acres	395
175 to 259 acres	217
260 to 499 acres	371
500 to 999 acres	221
1,000 acres and over	144
Total	3,286
Total in 1900	1,966

Land and Farm Areas

Approximate land, acres	926,720
Land in farms in 1910	763,048
Land in farms in 1900	751,065
Improved land in farms in 1910	611,762
Improved land in farms in 1900	652,923
Woodland in farms	35,387
Other unimproved land	115,899

Value of All Farm Property

Total value in 1910	$67,286,628
Total value in 1900	31,218,424
Per cent increase 1900-1910	115.5
Land in 1910	55,909,884
Land in 1900	25,769,590
Buildings in 1910	5,675,665
Buildings in 1900	2,297,130
Implements and machinery in 1910	1,741,053
Implements and machinery in 1900	907,410
Domestic animals, poultry, and bees in 1910	3,960,026
Domestic animals, poultry, and bees in 1900	2,244,294

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	11,904
Other cows	6,861
Yearling heifers	3,636
Calves	4,960
Yearling steers and bulls	1,937
Other steers and bulls	1,998
Total	31,296
Value	$874,834
Horses*	
Mature horses	18,256
Yearling colts	1,597
Spring colts	1,089
Total	20,942
Value	*$2,247,876
Mules—	
Mature mules	3,169
Yearling colts	217
Spring colts	144
Total	3,530
Value	$482,560
Asses and burros—	
Number	62
Value	$16,760
Swine—	
Mature hogs	13,473
Spring pigs	9,981
Total	23,454
Value	$143,626
Sheep—	
Rams, ewes, and wethers	14,807
Spring lambs	10,012
Total	24,819
Value	$83,771
Goats—	
Number	260
Value	$728
Total value all domestic animals	$3,850,155
Poultry and bees—	
Poultry of all kinds	175,456
Value	$101,710
Colonies of bees	3,014
Value	$8,161

Principal Crops

Description	Acres	Bushels
Corn	2,547	57,028
Oats	23,208	396,661
Wheat	24,786	310,587
Barley	125,114	3,827,187
Kaffir corn and milo maize	2,968	32,786
Dry edible beans	13,954	352,157
Potatoes	21,313	4,279,395

Hay and forage—	Acres	Tons
Timothy and clover mixed	190	320
Clover alone	70	352
Alfalfa	8,805	36,859
Other tame and cultivated grasses	3,633	3,975
Wild, salt, or prairie grasses	10,248	12,286
Grain cut green	80,851	119,032
All other hay and forage	1,119	1,624
Total	104,916	174,448

Poultry products—	
Poultry, raised, number	212,434
Eggs produced, dozen	955,501
Value poultry and eggs produced	$337,417
Honey and wax—	
Honey produced, pounds	104,645
Wax produced, pounds	3,459
Value of honey and wax produced	$6,565
Wool—	
Wool, fleeces shorn	20,477
Mohair and goat hair, fleeces shorn	37
Value of wool and mohair produced	$14,114
Special Crops—	
Potatoes, acres	21,313
Sweet potatoes, acres	19
All other vegetables, acres	6,728
Sugar beets, acres	132

Orchard fruits—	Number Bearing Trees
Apples	5,053
Apricots	53,007
Cherries	21,590
Peaches and nectarines	185,073
Pears	13,664
Prunes and plums	83,641
Total	362,028

Tropical fruits—	Number Bearing Trees
Figs	4,037
Lemons	75
Oranges	1,950
Pomelos	2
Olives	19,998
Total	26,062

Grapevines—	
Number in bearing	13,371,794
Small fruits—	
Strawberries, acres	33
Blackberries and dewberries, acres	31
All others, acres	28
Total	92

Nuts—	Number Bearing Trees
Almonds	97,024
Pecans	6
Walnuts	2,455
Total	99,485

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*Includes animals, age or sex not specified.

SAN JOAQUIN COUNTY SUMMARY—Concluded.

Irrigation

Number of farms irrigated in 1909	1,452
Acres irrigated in 1909	59,811
Acreage enterprises were capable of irrigating in 1910	77,083
Acreage included in projects	173,563
Main ditches, number	298
Length, miles	308
Laterals, number	49
Length, miles	192
Pumped wells, number	1,618
Cost of irrigation enterprises up to July 1, 1910	$1,689,720
Average cost per acre irrigation enterprises were capable of irrigating in 1910	21.92

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	6,314	$ 73,768
Clay,* tons	1,494	18,522
Natural gas, thousand	142,730	67,967
Sand-glass, tons	3,000	4,000
Stone industry	.....	900
Total	.....	$165,157

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*High-grade fire clay.

STANISLAUS COUNTY

Date of creation, April 1, 1854.

			1890	1900	1910
Land area	1,450 sq. miles	Population	10,040	9,550	22,522
County seat	Modesto (city)	Population	2,402	2,024	4,034

Population per square mile, 15.5

Oakdale (Station):

			Highest	Lowest
Elevation	156 feet	Temperature (1914)	104	29
Rainfall	16.78 inches	Snow	....	

"What is this Stanislaus County, of which we are hearing so much, and yet in a vague and contradictory way?" asks the man from Missouri. That is the question which we shall try to answer as plainly and frankly as possible, and leaving much unsaid. Stanislaus County is a fruit land—witness her 250,000 orchard trees (1910). It is a vine land, as testified by her two million vines. The abundant grain crops of this present year, 1914, upwards of two million sacks, show that Stanislaus is equal to any of the counties of the Mississippi Valley as a grain country. A million tons of hay, dotting the landscape with stacks as big as Pennsylvania barns, demonstrate her capacity for hay production, and her thirty thousand or more dairy cows, mostly grades and thoroughbreds, feeding on a hundred thousand acres of alfalfa, show that Stanislaus must be a great dairy country.

A GREAT DAIRY COUNTRY

Dairying is, probably, in a greater degree than any other branch of husbandry, the basis of agricultural prosperity, and in a wider sense, the foundation of the general welfare. Dairying improves the land, increases crops of all kinds, multiplies population of the most industrious and thrifty class, piles up bank accounts, fosters commercial business and encourages improved transportation, invites intelligent white settlement, and in every way tends to the building up and development of the community.

We will show our inquiring friends in distant states that Stanislaus County is pre-eminently a great dairy country, and while also a region of wonderfully varied and diversified agriculture, in grain, fruits and vegetables, and in livestock of all kinds, it is above all things else, a dairy land which, with the aid of her great public irrigation systems (which make this county unique in California), her fertile soil and her great number of small farmers from the east, north and south, has attained the position of the leading dairy county on the Pacific Coast, a position which all conditions indicate will be permanent.

"Since the introduction of irrigation, the price of land has advanced sharply, but the best land is still obtainable at a low price, and considering the quality of soil, low cost of water, great diversity of crops, and advantages of close markets, proabably *no other area* of equal size in the entire West *offers greater attractions* to the prospective settler than does this." (Department of Agriculture Soil Survey of the Modesto-Turlock Area, 1908.)

IT IS NO DREAM

The reality is wonderful enough. It is no dream. "The San Joaquin Valley," says William Allen White, of Kansas, "is the most productive valley in the world." Stanislaus County has more alfalfa, more dairies, more thoroughbred stock, and makes more butter—high-grade, creamery butter—than any other county in California—almost more than any two counties, in fact. This in itself testifies to the general prosperity and productiveness of the country and its desirability for residence and business, and as Stanislaus is the acknowledged banner county in the dairy industry on the Coast, it is proper to make this the leading topic of this little preachment on life as it is actually lived in California.

A LOOK AT THE COUNTRY

Let us look at the country, and consider why it is a good dairy country, and why it is a good country for livestock, fruit and other branches of agriculture as well as dairying. If I were a dairyman looking for a location somewhere between the two oceans I would look for a mild climate, good water and drainage, good markets and transporation, and a fairly productive soil. I have put soil fertility last, because the good farmer can generally make his soil to suit himself. All these conditions, plus an unusually productive soil, are to be found in Stanislaus County, California.

LOCATION AND EXTENT

Situated in the great San Joaquin Valley within a hundred miles of San Francisco Bay, Stanislaus County is 1,450 square miles in extent, or 236 square miles larger than the state of Rhode Island. Of its 951,000 acres the greater part is arable and about half is capable of irrigation. The valley floor, between the Sierra Nevada on the east and the Coast Range on the west, slopes gently toward the San Joaquin River, which flows northwesterly through the western side of the county.

STANISLAUS COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	13
3 to 9 acres	153
10 to 19 acres	319
20 to 49 acres	1,046
50 to 99 acres	439
100 to 174 acres	192
175 to 259 acres	83
260 to 499 acres	125
500 to 999 acres	142
1,000 acres and over	175
Total	2,687
Total in 1900	951

Land and Farm Areas

Approximate land, acres	928,000
Land in farms in 1910	649,392
Land in farms in 1900	830,692
Improved land in farms in 1910	512,189
Improved land in farms in 1900	622,700
Woodland in farms	18,756
Other unimproved land	118,447

Value of All Farm Property

Total in 1910	$43,787,887
Total value in 1900	17,031,950
Per cent increase 1900-1910	157.1
Land in 1910	35,324,743
Land in 1900	13,674,850
Buildings in 1910	3,320,475
Buildings in 1900	1,237,900
Implements and machinery in 1910	820,079
Implements and machinery in 1900	537,280
Domestic animals, poultry, and bees in 1910	4,323,090
Domestic animals, poultry, and bees in 1900	1,581,920

Domestic Animals on Farms and Ranges

Cattle*—	
Dairy cows	20,678
Other cows	9,047
Yearling heifers	5,294
Calves	7,252
Yearling steers and bulls	2,922
Other steers and bulls	3,765
Total	48,958
Value	*1,728,698
Horses*—	
Mature horses	11,818
Yearling colts	1,120
Spring colts	619
Total	13,557
Value	*$1,555,290

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*Includes animals, age or sex not specified.

OIL FIELDS—ANNUAL OUTPUT $50,000,000

STANISLAUS COUNTY SUMMARY—Concluded.

Mules—	
Mature mules	5,032
Yearling colts	236
Spring colts	174
Total	5,442
Value	$703,567
Asses and burros—	
Number	31
Value	$7,835
Swine—	
Mature hogs	13,610
Spring pigs	9,417
Total	23,027
Value	$158,491
Sheep—	
Rams, ewes and wethers	15,874
Spring lambs	7,378
Total	23,252
Value	$86,005
Goats—	
Number	217
Value	$575
Total value all domestic animals	$4,240,461
Poultry and bees—	
Poultry of all kinds	128,905
Value	$74,116
Colonies of bees	2,554
Value	$ 8,423

Principal Crops

Description	Acres	Bushels
Corn	662	12,297
Oats	38,546	688,542
Wheat	22,068	258,121
Barley	57,529	828,628
Kaffir corn and milo maize	4,448	80,343
Dry edible beans	373	4,395
Potatoes	207	17,502
Hay and forage—	Acres	Tons
Timothy alone	160	40
Clover alone	10	30
Alfalfa	40,917	149,214
Other tame and cultivated grasses	3,350	2,389
Wild, salt, or prairie grasses	7,400	4,976
Grains cut green	16,847	19,633
All other hay and forage	748	2,361
Total	69,432	178,643

Poultry products—	
Poultry raised, number	121,677
Eggs produced, dozens	648,248
Value of poultry and eggs produced	$237,685
Honey and wax —	
Honey produced, pounds	61,592
Wax produced, pounds	1,371
Value of honey and wax produced	$5,160
Wool—	
Wool, fleeces shorn	22,837
Mohair and goat hair, fleeces shorn	50
Value wool and mohair produced	$22,700

Special crops—	
Potatoes, acres	207
Sweet potatoes, acres	1,647
All other vegetables, acres	1,621
Orchard fruits—	Number Bearing Trees
Apples	3,680
Apricots	20,451
Cherries	1,182
Peaches and nectarines	154,553
Pears	4,158
Prunes and plums	6,095
Total	190,119
Tropical fruits—	Number Bearing Trees
Figs	37,676
Lemons	576
Oranges	10,492
Pomelos	18
Olives	5,458
Total	54,220
Grapevines—	
Number in bearing	1,932,302
Small fruits—	
Strawberries, acres	95
Blackberries, and dewberries, acres	53
All others, acres	13
Total	161
Nuts—	Number Bearing Trees
Almonds	33,726
Pecans	25
Walnuts	864
Total	34,615

Irrigation

Number of farms irrigated in 1909	1,911
Acres irrigated in 1909	84,015
Acreage enterprises were capable of irrigating in 1910	141,785
Acreage included in projects	340,914
Main ditches, number	23
Length, miles	153
Laterals, number	34
Length, miles	274
Pumped wells, number	3
Cost of irrigation enterprises up to July 1, 1910	$4,051,870
Average cost per acre irrigation enterprises were capable of irrigating in 1910	28.58

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	300	$ 2,400
Gold	.....	253,166
Mineral paint, tons	255	1,530
Silver	.....	671
Stone industry	.....	14,482
Total		$272,249
Number of mineral springs		2

THE SACRAMENTO VALLEY

SACRAMENTO COUNTY

Date of creation, February 18, 1850.

		1890	1900	1910
Land area.....983 sq. miles	Population,	40,339	45,915	67.806
County seat, Sacramento (city)	Population,	26.386	29,282	44,696

Population per square mile, 69.0

		Highest	Lowest
Elevation....... 71 feet	Temperature (1914)...	102	30
Rainfall........16.05 inches	Snow................	....	

Sacramento County, situated at the southern end of the great Sacramento Valley, is the fourth in point of wealth and sixth in point of population in California. It is one of the oldest counties in California, having been formed by an act of the first legislature that assembled in the Golden State. Its early history teems with interest as it records the stirring deeds of the brave pioneers who came here in the days of '49 seeking fortunes in the mines.

SPECIAL ADVANTAGES

But we are concerned now more with the present and future of the county than its history. It is a growing and prosperous community, offering special advantages to the homeseeker. It possesses soil, climate, water, transportation facilities and markets—the five factors that are essential to the farmer's success. Its farm products include all deciduous fruits, grapes, berries, nuts, citrus fruits, alfalfa, cereals, stock, poultry and eggs, butter and cheese, etc. It is a county in which large tracts are being subdivided into small farms, and hence, there is plenty of opportunity for the settler to purchase unimproved land.

The area of Sacramento County is mostly either fertile bottom lands lying along large rivers, or rich alluvial plains. The altitude varies from 30 to 125 feet, the land rising in gentle slopes on the eastern border of the county to meet the lower foothills of the Sierra Nevada Mountains.

WATER SUPPLY

Sacramento County has an abundance of water, being supplied by many streams. The great Sacramento River, which flows the full length of the valley, from Mt. Shasta to San Francisco Bay, is the western boundary of Sacramento County for a distance of about one hundred miles. The San Joaquin River, the other great waterway of the interior of Northern California, touches the county on the south. The American, the Cosumnes and the Mokelumne, all streams of importance, carrying water the year around, flow across the county. The Sacramento, the San Joaquin and their tributaries through many years of constant flow, have formed the rich delta lands of southern Sacramento County. This delta was once a great area of swamp land, subject to annual overflow, but through expenditure of vast sums of money, has been thoroughly reclaimed by the construction of great dykes, called levees in California, which keep the water from the cultivated fields. The delta, often referred to as The Netherlands of California on account of the similarity of the reclamation work to the dykes of Holland, consists of a number of islands, each of which is surrounded by a navigable waterway.

RIVER BOTTOM LANDS

No more fertile land is to be found anywhere in the world, not even in the famous Valley of the Nile, than this rich river bottom. Here are produced the vegetables that during certain months of the year supply the principal markets, not only of California but of several states including Washington, Oregon, Nevada, Utah, Idaho and Montana. This is also a district of luscious fruits and each year several thousand carloads go forward to Eastern markets from the river districts of Sacramento County alone.

Equally as rich as the land along the Sacramento River is that along the Cosumnes and American rivers. Both of these districts are noted for a large variety of products which they produce to perfection. Hops that grow along the Cosumnes River are as fine as any grown in the world and command the highest prices in the market. This district is also noted for its fruit.

VALLEY LANDS

But all the land of Sacramento County is not river bottom land. There are great alluvial plains containing thousands of acres of fertile land suited to the culture of a vast variety of profitable products. Not many years ago these plain lands were all farmed to grain, but during the past few years, as in other sections of the valley, grain farms have been subdivided and ten and twenty-acre tracts devoted to intensive cultivation have succeeded them.

IRRIGATION

The plains are exceedingly productive when irrigated and this is made easy because of the inexhaustible supply of water that underlies the entire area of Sacramento County. All that is necessary to obtain water is to sink a well from fifteen to forty feet and a flow sufficient for irrigation is obtained. The water is lifted from the well by a pump run by either a gasoline engine or an electric motor. Either is inexpensive. The possibilities of irrigating from wells in this county are well illustrated in the Florin District, just south of Sacramento City. This is a great Tokay grape and strawberry district. The only irrigation the plants receive besides the natural rainfall is from the well water. Florin annually ships many carloads of grapes and even more of strawberries to markets beyond the borders of the State.

FOOTHILL LANDS

Besides the bottom and the plain lands, there is still another class of productive land in Sacramento County. This is the rolling land at the beginning of the foothills of the Sierra Nevadas. This rolling land lies north of the American River and is no doubt the most picturesque part of all Sacramento County. It includes the prosperous colonies of Orangevale and Fair Oaks, noted for their production of citrus and semi-tropical fruit. Practically all the oranges grown in Sacramento County come from the pretty groves on the gentle slopes of Orangevale and Fair Oaks. Here, like in all Sacramento Valley counties that grow oranges, the golden fruit ripens from six weeks to two months earlier than that of any other orange growing district in the United States. Olives and almonds are also profitable crops in these colonies and the homes of some of the owners of tracts, as picturesque as any in California, are indicative of prosperity.

CAPITAL CITY

Sacramento City, the county seat and the capital of the State, is situated on the east bank of the Sacramento River, which is navigable the year around as far as Red Bluff, 150 miles north of Sacramento. It has a population of 75,000 and an assessed valuation of $65,000,000. Several lines of freight and passenger steamers ply between Sacramento and San Francisco and the passenger steamers are floating palaces similar to those on the Hudson River. Two transcontinental steam roads and four interurban electric lines enter Sacramento, which is an industrial city. The main shops of the Southern Pacific and Western Pacific railroads are located here. There are also three great fruit canning institutions and many factories of various kinds.

SACRAMENTO COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	12
3 to 9 acres	167
10 to 19 acres	237
20 to 49 acres	321
50 to 99 acres	170
100 to 174 acres	223
175 to 259 acres	96
260 to 499 acres	173
500 to 999 acres	111
1,000 acres and over	91
Total	1,601
Total in 1900	1,392

Land and Farm Areas

Approximate land, acres	629,120
Land in farms in 1910	473,044
Land in farms in 1900*	668,426
Improved land in farms in 1910	275,682
Improved land in farms in 1900	327,159
Woodland in farms	20,964
Other unimproved land	176,398

Value of All Farm Property

Total value in 1910	$36,694,682
Total value in 1900	19,326,626
Per cent increase 1900-1910	89.9
Land in 1910	30,425,404
Land in 1900	15,189,870
Buildings in 1910	3,205,416
Buildings in 1900	2,159,630
Implements and machinery in 1910	786,383
Implements and machinery in 1900	528,780
Domestic animals, poultry, and bees in 1910	2,277,479
Domestic animals, poultry, and bees in 1900	1,448,346

Domestic Animals on Farms and Ranges

Cattle†—	
Dairy cows	11,979
Other cows	5,484
Yearling heifers	3,195
Calves	5,568
Yearling steers and bulls	1,529
Other steers and bulls	1,961
Total	29,716
Value	†$838,431
Horses—	
Mature horses	8,770
Yearling colts	773
Spring colts	426
Total	9,969
Value	$1,022,335
Mules—	
Mature mules	703
Yearling colts	30
Spring colts	10
Total	743
Value	$87,020
Asses and burros—	
Number	19
Value	$6,245
Swine—	
Mature hogs	6,421
Spring pigs	4,034
Total	10,455
Value	$73,278
Sheep—	
Rams, ewes, and wethers	25,828
Spring lambs	21,129
Total	46,957
Value	$160,221
Goats—	
Number	89
Value	$280
Total value all domestic animals	$2,187,810
Poultry and bees—	
Poultry of all kinds	116,556
Value	$84,188
Colonies of bees	1,835
Value	$5,481

Principal Crops

Description	Acres	Bushels
Corn	795	34,089
Oats	4,174	66,949
Wheat	10,704	103,728
Barley	4,599	75,575
Kaffir corn and milo maize	2	43
Dry edible beans	7,801	166,852
Potatoes	1,406	160,519
Hay and forage—	Acres	Tons
Timothy alone	1,303	1,187
Clover alone	222	422
Alfalfa	9,602	32,021
Other tame and cultivated grasses	3,714	3,570
Wild, salt, or prairie grasses	1,909	2,196
Grains cut green	40,130	31,040
All other hay and forage	56	112
Totals	56,936	70,548

Poultry products—	
Poultry raised, number	144,704
Eggs produced, dozen	666,906
Value of poultry and eggs produced	$249,821
Honey and wax—	
Honey produced, pounds	55,272
Wax produced, pounds	160
Value of honey and wax produced	$5,393
Wool—	
Wool, fleeces shorn	41,103
Mohair and goat hair, fleeces shorn	7
Value of wool and mohair produced	$35,449
Special crops—	
Potatoes, acres	1,406
All other vegetables, acres	6,367
Sugar beets, acres	7
Orchard fruits—	Number Bearing Trees
Apples	10,948
Apricots	10,480
Cherries	17,173
Peaches and nectarines	99,635
Pears	161,094
Prunes and plums	206,553
Total	505,883
Tropical fruits—	Number Bearing Trees
Figs	1,145
Lemons	2,500
Oranges	46,256
Pomelos	864
Olives	34,077
Total	84,842
Grapevines—	
Number in bearing	7,627,510
Small fruits—	
Strawberries, acres	450
Blackberries and dewberries, acres	52
All others, acres	52
Total	554
Nuts—	Number Bearing Trees
Almonds	66,372
Pecans	3
Walnuts	755
Total	67,130

Irrigation

Number of farms irrigated in 1909	1,053
Acres irrigated in 1909	53,683
Acreage enterprises were capable of irrigating in 1910	69,970
Acreage included in projects	74,588
Main ditches, number	213
Length, miles	238
Laterals, number	5
Length, miles	8
Pumped wells, number	1,168
Cost of irrigation enterprises up to July 1, 1910	$1,452,471
Average cost per acre irrigation enterprises were capable of irrigating in 1910	20.76

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	22,535	$ 144,191
Gold	.....	2,503,633
Natural gas, thousand	72,000	36,000
Silver	.....	3,406
Stone industry	.....	238.476
Total		$2,925,706

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*By an error the acreage in 1900 was reported to be 668.426, instead of 501,448.

†Includes animals, age or sex not specified.

YOLO COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	1,014 sq. miles	Population,	12,684	13,618	13,926
County seat,	Woodland (city)	Population,	3,069	2,886	3,187

Population per square mile, 13.7

Davis (Station):			Highest	Lowest
Elevation	51 feet	Temperature (1914)	104	26
Rainfall	22.25 inches	Snow		

Situated sixty miles from San Francisco, in a northeasterly direction; immediately across the Sacramento River from the west of California's capital city; lying directly between San Francisco, Portland and Sacramento—is Yolo County.

Almost in the center of California, and the great fertile Sacramento Valley—is Yolo County.

Our argument has to do primarily and principally with the farmer, the man of family who is seeking a location in the last great West, the Pacific Coast States of America.

THE FARMER'S OPPORTUNITY

To such a man, three factors stand out most prominently in the development of the varied resources of Yolo County, to wit: in order of their importance, irrigation, reclamation, subdivision. More money has been expended in irrigation enterprises during the past two years than in all previous history; more has been expended in reclaiming low and overflow lands and placing them in a high state of production in the past three years than in all previous years combined. Results? More than twenty subdivision propositions are now on the market, many of them offering small farm units at tempting figures and terms to the purchaser who may have but a little ready cash to apply.

WATER AND DIVERSITY OF CROPS

Water, both surface and subterranean, everywhere present for irrigation at all seasons; with diversified crops intensively farmed, proves conclusively that the man with but a few acres, say twenty to forty, is accomplishing larger and more certain results with less of labor and of worry than the man with an excess of acres.

GOVERNMENT

Yolo is truly a progressive county. It is really an agricultural community without any great city to overtop and dominate its affairs. There is a cohesiveness about the county that gives it strength. It is governed by a board of five supervisors, every one of them a man of the soil, individually and collectively; men who think first of the benefit and needs of those who make more grow than ever grew there before. To this end they maintain a County Horticultural Commissioner with eight assistants who are in constant touch with every farmer in the county; a government "Farm Adviser" who devotes his entire time in the field, giving attention and encouragement to farmers who seek it, maintaining bureaus throughout the county at convenient places where neighborhood meetings are held at frequent intervals; a magnificent public school system with free books for pupils; a free Carnegie library with 53 county branches, and a County Board of Trade with a number of branches in charge of competent men. These organizations are all supported by the County Supervisors, and they may obtain funds from no other source, that the home-seeker and investor may be supplied with accurate, unbiased information, advice and helpful suggestions free of charge.

DIVERSITY OF CROPS

The county contains nearly half a million acres of about floor level land; the largest contiguous body of unbroken soil of any county in the West. Let us quote Elwood Mead, United States Government soil expert, who in reporting the result of his soil and product investigations in Yolo County said, "It is ideal grain, alfalfa and fruit land. You may find growing on this soil wheat, barley, corn, oats, alfalfa; all the vegetables of a temperate and sub-tropical climate; apples, figs, pears, apricots, nectarines, plums, prunes, oranges, limes, pomegranates, grapes (table, wine and raisin), almonds, olives, English walnuts, berries of all kinds, and melons."

TRANSPORTATION

The transportation problem has been splendidly solved in Yolo County. A number of steam and electric railways permeate every section of the county, and with a frontage of ninety miles on the Sacramento River, which is always navigable, give every town and village within its borders excellent shipping and marketing facilities.

Yolo County producers are within one hundred miles of more than one million consuming peoples.

This county has the lowest tax rate, with but one or two exceptions, of any county in Northern California, and is virtually out of debt, with all current bills paid in full.

This county is favored with nearly one hundred rail and water shipping points. Many of them are splendid towns and villages, having fine schools, churches, a high-class American citizenship, and with one or two exceptions, are free of saloons.

CITIES AND TOWNS

Woodland, the county seat, in the center of the county, is one of the most progressive cities in California, and its clean, well-paved streets are lined with magnificent residences and fine business blocks. Woodland has more money in bank, and bank assets than any town of similar size in the entire country, and this wealth came from Yolo County's peerless soil.

Winters, situated twenty miles southwest of Woodland, is the second largest town in the county. It lies at the base of picturesque hills, and is in the very center of Putah Creek's rich delta lands.

Guinda and Rumsey are located near the head of Capay Valley, one of the most beautiful and picturesque spots in the Sacramento Valley.

Capay is situated where the Capay Valley opens into the great Sacramento Valley. Esparto is three miles from the entrance to Capay Valley. Madison is twelve miles west from Woodland. These are all thriving towns in important farming sections.

Davis is situated on Putah Creek, thirteen miles west of Sacramento and ten miles south of Woodland. It is a railroad junction and enjoys excellent transportation facilities.

The University Farm, operated in conjunction with the Agricultural Department of the University of California, is situated at Davis. This site was chosen after considering seventy-seven other localities in California. This was due to the superior climate, soil and transportation advantages of Yolo County. The soil is adapted to almonds, fruits of all kinds, and alfalfa.

Dunnigan and Zamora are railroad towns in the northern part of the county. Yolo is a flourishing village in the heart of a great fruit section. Knights Landing is the most northerly river town in the county. Then we have Washington and Bryte City just across from Sacramento, also West Sacramento and Clarksburg near by. All these towns, in fact, all the towns throughout the county, are in flourishing condition. All are making, and will continue, a good substantial growth indefinitely.

YOLO COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	4
3 to 9 acres	53
10 to 19 acres	115
20 to 49 acres	283
50 to 99 acres	166
100 to 174 acres	170
175 to 259 acres	83
260 to 499 acres	189
500 to 999 acres	107
1,000 acres and over	85
Total	1,255
Total in 1900	1,214

Land and Farm Areas

Approximate land, acres	648,960
Land in farms in 1910	463,383
Land in farms in 1900	552,065
Improved land in farms in 1910	317,268
Improved land in farms in 1900	351,213
Woodland in farms	77,576
Other unimproved land	68,539

Value of All Farm Property

Total value in 1910	$31,798,096
Total value in 1900	19,989,751
Per cent increase 1900-1910	59.1
Land in 1910	25,684,710
Land in 1900	15,906,280
Buildings in 1910	2,799,277
Buildings in 1900	1,935,590
Implements and machinery in 1910	795,162
Implements and machinery in 1900	510,430
Domestic animals, poultry, and bees in 1910	2,518,947
Domestic animals, poultry, and bees in 1900	1,637,451

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	7,197
Other cows	3,761
Yearling heifers	2,654
Calves	2,649
Yearling steers and bulls	1,194
Other steers and bulls	1,522
Total	18,977
Value	$553,417
Horses—	
Mature horses	7,127
Yearling colts	814
Spring colts	374
Total	8,315
Value	$907,487
Mules—	
Mature mules	3,501
Yearling colts	265
Spring colts	189
Total	3,955
Value	$555,410
Asses and burros—	
Number	46
Value	$10,480
Swine—	
Mature hogs	15,483
Spring pigs	8,714
Total	24,197
Value	$152,155
Sheep—	
Rams, ewes, and wethers	49,807
Spring lambs	29,639
Total	79,446
Value	$284,627
Goats—	
Number	716
Value	$1,552
Total value all domestic animals	$2,465,128
Poultry and bees—	
Poultry of all kinds	76,972
Value	$43,326
Colonies of bees	2,442
Value	$10,472

Principal Crops

Description	Acres	Bushels
Corn	201	5,123
Oats	515	12,365
Wheat	13,452	237,593
Barley	49,530	1,236,884
Kaffir corn and milo maize	21	710
Dry edible beans	1,820	50,974
Potatoes	402	45,493
Hay and forage—	Acres	Tons
Clover alone	326	1,030
Alfalfa	16,496	66,110
Other tame and cultivated grasses	3,927	5,323
Wild, salt, or prairie grasses	534	740
Grains cut green	24,479	31,106
All other hay and forage	97	424
Total	45,859	104,733

Poultry products—	
Poultry raised, number	84,010
Eggs produced, dozen	347,209
Value poultry and eggs produced	$131,892
Honey and wax—	
Honey produced, pounds	106,982
Wax produced, pounds	1,125
Value of honey and wax produced	$8,313
Wool—	
Wool, fleeces shorn	82,602
Mohair and goat hair, fleeces shorn	316
Value wool and mohair produced	$76,497
Special crops—	
Potatoes, acres	402
Sweet potatoes, acres	31
All other vegetables, acres	1,086
Sugar beets, acres	5,714
Orchard fruits—	Number Bearing Trees
Apples	2,512
Apricots	117,228
Cherries	4,534
Peaches and nectarines	116,003
Pears	38,115
Prunes and plums	119,193
Total	397,585

YOLO COUNTY SUMMARY—Concluded.

	Number Bearing Trees
Tropical fruits—	
Figs	10,476
Lemons	183
Oranges	2,371
Pomelos	1,325
Olives	4,482
Total	18,837
Grapevines—	
Number in bearing	2,568,019
Small fruits—	
Strawberries, acres	1
Blackberries and dewberries, acres	6
All others, acres	3
Total	10

	Number Bearing Trees
Nuts—	
Almonds	149,019
Pecans	9
Walnuts	1,270
Total	150,298
Irrigation	
Number of farms irrigated in 1909	333
Acres irrigated in 1909	11,754
Acreage enterprises were capable of irrigating in 1910	14,697
Acreage included in projects	55,967
Main ditches, number	8
Length, miles	87
Laterals, number	8
Length, miles	83
Pumped wells, number	58
Cost of irrigation enterprises up to July 1, 1910	$311,660
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$21.21

SOLANO COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	822 sq. miles	Population,	20,946	24,143	27,559
County seat, Fairfield (town)		Population	....	....	834
		Population per square mile, 33.5			
Suisun (Station):					
				Highest	Lowest
Elevation	20 feet	Temperature (1914)		106	32
Rainfall	25.32 inches	Snow			....

Solano County is the western gateway to the Sacramento Valley. Its southwestern extremity borders on the bay region and hence it has many miles of deep water front. It consists of foothill and plain lands.

INDUSTRIAL AND FARMING FACILITIES

Solano County commands attention both as an industrial and as a farming community. Thousands of cattle, sheep and horses fatten on its foothills and marsh lands and its industrial establishments pay out fortunes each year to hundreds of happy employes. But it is as a fruit producing county, however, that Solano is probably most widely known. The first deciduous fruits to reach the markets of the United States each year invariably come from Solano County. There are several sequestered valleys which are arms of the main Sacramento Valley, where the finest of cherries, plums, peaches, apricots and pears are produced. Fortunes have been made by the fruit growers in these favored localities.

Equally as productive as the soil in the protected valleys is the bottom land along the Sacramento River, much of which has been reclaimed by the construction of great levees. This land is excellent for all kinds of fruit, vegetables, alfalfa, etc.

Extending across the county from the bottom lands on the east to the foothills on the west, is a rich alluvial plain. This plain is farmed to grain, stock raising, dairying, alfalfa, growing deciduous and citrus fruits, poultry production, etc.

CITY OF DIXON

The city of Dixon on the main line of the Southern Pacific Company in the northern part of the county, is a great dairy center and nut producing section. Some of the finest dairy herds in California are located here and the milk and butter produced are sold in the markets around San Francisco Bay. The vicinity of Dixon was formerly a grain producing center, but with the introduction of deep wells for irrigation, alfalfa succeeded grain and the dairy business followed the successful production of alfalfa. Some of the finest ranches in California for the breeding of thoroughbred cattle and sheep are also in the vicinity of Dixon.

In the southern part of the county on what are known as the Montezuma Hills, is produced an enormous wheat crop each year. The wheat is of a choice milling quality. The delta lands bordering the Suisun Bay region offer a green pasture all the year round for thousands of head of stock. This large area is susceptible of a wonderful development.

RAIL AND WATER TRANSPORTATION

Rail and deep water transportation are available to Solano County. The Southern Pacific Company crosses the county with several lines. The Oakland, Antioch and Eastern Electric Railway, operating between Sacramento and San Francisco, has opened new territory in the southeastern part of the county. The Sacramento Valley Electric Railroad, in course of construction, when completed will run as far north as Red Bluff, in Tehama County, connects with the Oakland and Antioch a few miles south of Dixon. The first link of this road, operating between Dixon and the main line of the Oakland and Antioch began train service in October, 1914. The county has an excellent system of improved highways and all streams are crossed by substantial bridges.

MANUFACTURES

The manufacturing centers of the county are at Vallejo and Benicia, which are located in the southwestern part of the county. At Vallejo is the United States Government Mare Island Navy Yard, ranking second in importance of all Government yards, that of New York alone being larger. There are regularly employed 2,200 skilled workmen. The improvements and equipment of the plant are valued at $12,000,000 and no battleship that has yet been planned is too great to be constructed at these yards. The great collier *Jupiter*, with a carrying capacity of 12,500 tons of coal and 1,000 tons of fuel oil, was constructed here. The *Jupiter* is 520 feet in length and 65 feet in width. Her net cost was $1,070,000. Early in 1914 construction was started at the yards of the fuel ship *Kanawha,* and when she is completed a sister ship to be known as the *Maumee* is to be built. These boats will be 455 feet long, 56 feet wide, and will have a draft of 26 feet, 4 inches.

CITIES AND TOWNS

Vallejo is a pretty city with many beautiful homes. It has a large business section, two banks, paved streets, public library, good water supply, city hall, fire department, sewer system, several newspapers and ten churches.

Benicia is a well located manufacturing town, having many miles of deep water front. It boasts of several large industrial plants.

The county seat of Solano County is Fairfield, which is a sister city of Suisun. A magnificent court house, which was recently completed, is one of the features of Fairfield. Suisun-Fairfield has two banks, good hotels, excellent transportation facilities, steam, water and electricity, large packing houses, and is the business center of a large, prosperous community.

An important industry of the county is the manufacture of cement. Five miles northeast of Suisun is a large plant with a capacity of 6,000 barrels daily. The quality of the product is the best, and as there is a great demand for cement in building construction and road work, the plant operates the year round.

Vacaville is a pretty little place in the Vaca Valley,

SUN-KISSED ORANGES—CALIFORNIA'S ACHIEVEMENT which is one of the rich deciduous fruit sections already referred to. The gross sales of the fruit shipped from Vacaville total more than $2,500,000 annually. Cherries grown here are usually the first to reach the market.

Rio Vista on the Sacramento River in the southeastern portion of the county, is one of the oldest towns in the State, having been founded prior to the discovery of gold. It is the shipping point for a rich farming district, and has excellent river transportation, passenger and freight steamers connecting it with San Francisco and Sacramento daily. Solano County is fairly representative of the agricultural side of California. Its lands are typical, as are its climate and its industries. It has the great advantage of a river and bay frontage, cheap transportation, nearness to market, and the cooling sea breeze. There are no winters in the usual sense of the term; the summers are rainless. Farm work goes on the year round; stock is in the field and fields are green. Some crop is being harvested and marketed every month in the year.

SOLANO COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	6
3 to 9 acres	45
10 to 19 acres	60
20 to 49 acres	198
50 to 99 acres	170
100 to 174 acres	167
175 to 259 acres	89
260 to 499 acres	156
500 to 999 acres	144
1,000 acres and over	108
Total	1,143
Total in 1900	1,151

Land and Farm Areas

Approximate land, acres	526,080
Land in farms in 1910	474,866
Land in farms in 1900	480,551
Improved land in farms in 1910	310,452
Improved land in farms in 1900	344,058
Woodland in farms	44,534
Other unimproved land	119,880

Value of All Farm Property

Total value in 1910	$28,727,683
Total value in 1900	20,780,434
Per cent increase 1900-1910	38.2
Land in 1910	23,025,081
Land in 1900	16,903,310
Building in 1910	2,278,540
Building in 1900	1,905,970
Implements and machinery in 1910	767,136
Implements and machinery in 1900	649,320
Domestic animals, poultry and bees in 1910	2,656,926
Domestic animals, poultry and bees in 1900	1,321,834

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	9,279
Other cows	4,257
Yearling heifers	1,933
Calves	3,720
Yearling steers and bulls	1,187
Other steers and bulls	1,408
Total	21,784
Value	$605,378
Horses—	
Mature horses	6,993
Yearling colts	695
Spring colts	362
Total	8,050
Value	$884,500
Mules—	
Mature mules	2,157
Yearling colts	84
Spring colts	78
Total	2,319
Value	$295,866
Asses and burros—	
Number	23
Value	$2,800
Swine—	
Mature hogs	8,836
Spring pigs	4,732
Total	13,568
Value	$89,528
Sheep—	
Rams, ewes, and wethers	96,921
Spring lambs	73,232
Total	170,153
Value	$737,457
Goats—	
Number	392
Value	$1,218
Total value all domestic animals	$2,616,747
Poultry and bees—	
Poultry of all kinds	74,683
Value	$39,384
Colonies of bees	256
Value	$795

Principal Crops

Description	Acres	Bushels
Corn	91	935
Oats	1,306	25,711
Wheat	20,924	391,753
Barley	41,647	1,263,357
Dry edible beans	2,553	65,755
Potatoes	311	42,416
Hay and forage—	Acres	Tons
Timothy alone	2,566	2,856
Timothy and clover mixed	375	381
Clover alone	60	174
Alfalfa	2,145	10,617
Other tame and cultivated grasses	381	636
Wild, salt, or prairie grasses	496	771
Grains cut green	33,641	41,552
All other hay and forage	29	41
Totals	39,693	57,028

Poultry products—	
Poultry raised, number	66,403
Eggs produced, dozen	426,261
Value of poultry and eggs produced	$128,295
Honey and wax—	
Honey produced, pounds	2,873
Value of honey and wax produced	$491
Wool—	
Wool, fleeces shorn	157,499
Mohair and goat hair, fleeces shorn	3
Value wool and mohair produced	$161,312
Special Crops—	
Potatoes, acres	311
All other vegetables, acres	650
Sugar beets, acres	4

Orchard fruits—	Number Bearing Trees
Apples	4,862
Apricots	310,262
Cherries	53,923
Peaches and nectarines	341,266
Pears	182,194
Prunes and plums	465,341
Total	1,357,848

Tropical fruits—	Number Bearing Trees
Figs	4,598
Lemons	126
Oranges	2,950
Pomelos	15
Olives	1,221
Total	8,910

SOLANO COUNTY SUMMARY—Concluded.

Grapevines—	
Number in bearing	1,213,265
Small fruits—	
Strawberries, acres	5
Blackberries and dewberries, acres	5
All others, acres	2
Total	12
Nuts—	Number Bearing Trees
Almonds	98,276
Pecans	134
Walnuts	1,806
Total	100,216

Irrigation

Number of farms irrigated in 1909	150
Acres irrigated in 1909	3,610
Acreage enterprises were capable of irrigating in 1910	7,160
Acreage included in projects	8,192
Main ditches, number	20
Length, miles	22
Pumped wells, number	125
Cost of irrigation enterprises up to July 1, 1910	$135,532
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$18.93

Mineral Production in 1913

Substance	Amount	Value
Mineral water, gallons	23,600	$3,440
Natural gas, thousand	6,319	7,366
Stone industry	.....	28,915
Other minerals	.....	1,800,000
Total		$1,839,721
Number of mineral springs		2

PLACER COUNTY

Date of creation, April 25, 1851.

		1890	1900	1910
Land area....1,395 sq. miles	Population,	15,101	15,786	18,237
County seat...Auburn (city)	Population,	1,595	2,050	2,376

Population per square mile, 13.1

		Highest	Lowest
Elevation....... 1,360 feet	Temperature (1914)...	104	28
Rainfall........26.43 inches	Snow	....	

Valley, foothill and mountain lands are found within the confines of Placer County. The county extends from the floor of the Sacramento Valley across the Sierra Nevada Mountains to the western boundary line of the state of Nevada.

Its general direction is northeast and southwest; it is about 100 miles long and varies in width from ten to thirty miles, this being determined by the course of rivers that mark its northern and southern boundaries.

The total area of the county is 1,395 square miles, of which 810 square miles are mountains, 450 foothills and the remainder valley lands. The altitude ranges from 40 feet above sea level in the Sacramento Valley to 8,000 or more at the summit of the mountains. From an elevation of 2,500 feet to the summit of the Sierra snow falls in winter, increasing in depth as the altitude becomes greater.

FRUIT SECTION

Placer is one of the most noted fruit producing counties in California. The fruit belt extends from the western boundary lines to Colfax and a considerable distance beyond. In this belt is produced practically every horticultural product known to the temperate zones. The list includes oranges, lemons, limes, pomelos, peaches, plums, prunes, cherries, apricots, pears, persimmons, nectarines, loquats, grapes, figs, olives, almonds, walnuts, apples, etc.

Roseville, Rocklin, Loomis, Penryn, Newcastle, Auburn, Lincoln, Bowman, Applegate, Weimer, Colfax, Dutch Flat and Towle are all important fruit shipping points during the fruit season. In the lower altitudes of the fruit belt the principal horticultural products are oranges, peaches, plums, cherries, pears and grapes. In the higher altitudes fine winter apples are raised, also Hungarian prunes and Bartlett pears that are the equal of any.

SOIL

The soil of the western portion of the county is of alluvial composition, as is all the soil in the Sacramento Valley, and is very productive. In the foothills the prevailing soil is a decomposed granite, rich in all essentials for plant production.

Placer County orchardists are prosperous and contented. Some of the prettiest farms in the State are to be found here. Most of the product is shipped to Eastern markets in carload lots. Several thousand cars are shipped annually.

As in all counties whose boundaries extend into the heart of the Sierra Nevada Mountains, lumbering is an industry of considerable importance in Placer County. The sugar pine, yellow pine, fir and cedar are the commercial trees that compose the great forests on the divides. There are several large lumber mills in operation and there is a wealth of uncut timber on the mountain plateaus.

MINERAL RESOURCES

Placer is rich in minerals. Its gold production since 1849 is estimated at more than $75,000,000. Several large drift mines are now in operation and they are among the largest in California. There are great bodies of gold, copper and iron ore, and valuable deposits of asbestos, lime, clay, and other useful minerals.

In the vicinity of Lincoln are great deposits of potter's clay, and one of the leading industries of the county is the manufacture of pottery. At Rocklin are quarries that produce granite which ranks with the best in the United States as a building material.

IRRIGATION AND POWER PLANTS

Placer County is well watered, its northern and southern boundaries being mountain streams fed by numerous tributaries that rise within the confines of the county. These streams furnish water for three purposes —domestic use for cities, irrigation and power development. For the generation of electric energy by water power, Placer is in the very front rank of the counties of California. A great electrical development and irrigation project has just been completed in the higher alti-

THE VINEYARDS OF FRANCE OUTDONE IN CALIFORNIA

tudes of Placer County. By the construction of great dams an immense quantity of water has been impounded. This water is used to turn the wheels of generators to create electricity for lights and power in the cities of Sacramento, Oakland, San Francisco and elsewhere, and after it passes through the power houses, it is again taken from the streams and conveyed in canals to the foothill and valley farms, where it is used to irrigate the growing crops. There is an abundance of water for irrigation in every part of this rich and resourceful county.

Placer County is sometimes spoken of as the gateway to the Sacramento Valley. The appellation is not inappropriate, as the county is the first through which the tourist passes while enroute to California from the East over the lines of the Southern Pacific Railroad. The visitor's first glimpse of California is of the rugged Sierra Nevada Mountains with their deep canyons, timbered plateaus and snow-capped peaks. As the train winds down from the mountain, the visitor next sees the pretty foothill orchards and finally the fertile valley lands.

MOUNTAIN SCENERY

The mountain scenery of Placer County is magnificent. From the peaks are presented views as awe-inspiring as can be seen from the world famous Alps. Lake Tahoe lies partly in Placer County, and many of the resorts on the shores of that magnificent body of water are in this county. Mountain streams and lakes are numerous and here the gamey trout awaits the skillful angler's fly. This is also a huntsman's paradise. Grouse, valley and mountain quail, doves, wild pigeon and deer are found, and for those who wish to test their skill and courage against big game, bear and California lion are found by penetrating into the depths of the mountains.

The freight terminal of the Southern Pacific Company is located at Roseville, where the eastern and northern main lines of the railroad converge. A pre-cooling and icing plant, by which deciduous fruit is cooled and iced before being shipped to the East is also located here.

Near Loomis, the United States Government maintains an experimental station for fig raising, which promises to become an important industry in California within a few years. Figs grow readily in California and begin to bear the second year, producing an abundant crop by the fifth year.

The county seat is Auburn, situated in the heart of the foothills. It is a delightful little city surrounded by thriving orchards.

The climate of the foothill section of Placer County is delightful at all seasons of the year, and the air being laden with a balsamic ozone is a tonic to those with weak heart or lungs.

PLACER COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	2
3 to 9 acres	52
10 to 19 acres	109
20 to 49 acres	289
50 to 99 acres	206
100 to 174 acres	174
175 to 259 acres	69
260 to 499 acres	75
500 to 999 acres	50
1,000 acres and over	36
Total	1,062
Total in 1900	1,076

Land and Farm Areas

Approximate land, acres	892,800
Land in farms in 1910	248,080
Land in farms in 1900	440,371
Improved land in farms in 1910	98,608
Improved land in farms in 1900	121,063
Woodland in farms	32,194
Other unimproved land	117,278

Value of All Farm Property

Total value in 1910	$10,234,101
Total value in 1900	6,547,761
Per cent increase 1900-1910	56.3
Land in 1910	7,747,744
Land in 1900	4,839,730
Buildings in 1910	1,399,840
Buildings in 1900	998,620
Implements and machinery in 1910	320,083
Implements and machinery in 1900	222,060
Domestic animals, poultry and bees in 1910	766,434
Domestic animals, poultry and bees in 1900	487,351

Domestic Animals on Farms and Ranges

Cattle*—	
Dairy cows	2,421
Other cows	2,283
Yearling heifers	602
Calves	1,204
Yearling steers and bulls	428
Other steers and bulls	532
Total	7,470
Value	*$182,827
Horses—	
Mature horses	3,762
Yearling colts	294
Spring colts	137
Total	4,193
Value	$398,692
Mules—	
Mature mules	459
Yearling colts	13
Spring colts	26
Total	498
Value	$58,460
Asses and burros—	
Number	66
Value	$1,529
Swine—	
Mature hogs	1,822
Spring pigs	1,565
Total	3,387
Value	$23,785
Goats—	
Number	1,542
Value	$3,455
Sheep—	
Rams, ewes and wethers	15,142
Spring lambs	9,326
Total	24,468
Value	$68,716
Total value all domestic animals	$737,464
Poultry and bees—	
Poultry of all kinds	43,619
Value	$26,714
Colonies of bees	657
Value	$2,256

Principal Crops

Description	Acres	Bushels
Corn	27	1,055
Oats	3,030	40,397
Wheat	5,721	62,167
Barley	1,318	17,128
Kaffir corn and milo maize	8	161
Potatoes	72	7,442
Hay and forage—	Acres	Tons
Timothy alone	38	37
Timothy and clover mixed	20	27
Clover alone	78	77
Alfalfa	465	1,249
Other tame and cultivated grasses	218	206
Wild, salt or prairie grasses	1,202	824
Grains cut green	14,009	10,978
All other hay and forage	4	6
Total	16,034	13,404

Poultry products—	
Poultry raised, number	62,151
Eggs produced, dozen	235,606
Value poultry and eggs produced	$110,974
Honey and wax —	
Honey produced, pounds	7,338
Wax produced, pounds	80
Value of honey and wax produced	$814
Wool—	
Wool, fleeces shorn	28,841
Mohair and goat hair, fleeces shorn	177
Value wool and mohair produced	$21,728
Special crops—	
Potatoes, acres	72
All other vegetables, acres	408
Orchard fruits—	
Apples	42,704
Apricots	4,092
Cherries	31,209
Peaches and nectarines	683,824
Pears	142,999
Prunes and plums	279,766
Total	1,184,594
Tropical fruits—	Number Bearing Trees
Figs	4,463
Lemons	714
Oranges	26,921
Pomelos	289
Olives	26,396
Total	58,783
Grapevines—	
Number in bearing	1,340,132
Nuts—	Number Bearing Trees
Almonds	11,539
Pecans	2
Walnuts	535
Total	12,076

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*Includes animals, age or sex not specified.

PLACER COUNTY SUMMARY—Concluded.

Irrigation

Number of farms irrigated in 1909	618
Acres irrigated in 1909	16,845
Acreage enterprises were capable of irrigating in 1910	23,365
Acreage included in projects	61,751
Main ditches, number	35
Length, miles	194
Laterals, number	46
Length, miles	108
Pumped wells, number	2
Cost of irrigation enterprises up to July 1, 1910	$2,798,740
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$119.78

Mineral Production in 1913

Substance	Amount	Value
Brick, M.	1,900	$40,000
Clay, tons	63,600	47,200
Copper, pounds	429	67
Gold	.....	220,785
Lead, tons	805	35
Quartz, tons	2,000	4,000
Silver	.....	2,972
Stone industry	.....	205,749
Total		$520,808
Number of mineral springs		12

HARVESTING SOME CROP EVERY DAY IN THE YEAR

EL DORADO COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	1,753 sq. miles	Population	9,232	8,986	7,492
County seat	Placerville	Population	1,690	1,748	1,914

Population per square mile, 4.3

			Highest	Lowest
Elevation	1,875 feet	Temperature (1914)	98	24
Rainfall	42.45 inches	Snow	4.0 inches	

From a historical standpoint, El Dorado will always be one of the most interesting counties of California, for it was here that James Marshall discovered gold in a mill race at Coloma on the American River in 1848, and for the first time directed the attention of the world to this land of wonderful resources. In the early days of California's history, El Dorado was the scene of many deeds which have been vividly pictured by some of the best writers of American literature. One of the main overland roads across which the pioneers came upon entering California in their ox teams from the East, leads directly to Placerville, the county seat, in the early days known as Hangtown, which was one of the liveliest of all mining towns in the '50s.

But it is not from historical interest alone that El Dorado is attracting attention today. The county is exceedingly resourceful and offers just as good or better opportunities to settlers in 1915 as it did to fortune hunters in '49. The principal industries of the county are mining, fruit raising, lumbering, stock raising and general farming. In all of these branches of endeavor there are excellent opportunities for development, as land is to be had for a reasonable price in El Dorado and there is abundance of water for irrigation.

FRUITS

For certain products, soil and climatic conditions are unexcelled and the husbandman who plants Bartlett pears, plums, prunes, apples, peaches, olives and walnuts is sure of success. Oranges are grown in the western part of the county. All of these fruits have been tried and found profitable year after year for the grower. The Bartlett pear grown in El Dorado County can not be excelled. Prices realized in Eastern markets for all El Dorado fruits are the very highest. This county was the first to adopt the standard pack, which assures quality of the first class to the purchaser.

Being a foothill and mountain county, the products of El Dorado do not ripen as early as those in the counties in lower altitudes on the floor of the Sacramento Valley. This fact is not a disadvantage, as it might at first seem, but a decided advantage to the El Dorado grower, because his fruits come upon the market after the valley crops of the same varieties have been harvested and marketed. Hence, the mountain products do not meet with competition.

LAND

Unimproved land in El Dorado County can be purchased for from $20 to $80 an acre. In most cases it is covered with a growth of timber, which has to be cut before cultivation can be started. This in most cases does not add to the cost of the land, as the cut timber can be sold and it pays a large portion of the cost of clearing. The soil is rich sandy loam and decomposed lava, a gray volcanic rock. Most of the soils are formed by the disintegration of slate and allied rocks. They are deep and well drained and readily retain moisture.

IRRIGATION

There is abundance of water for irrigation in El Dorado, derived from the American River on the north and the Cosumnes and its tributaries on the south. These streams rise in the higher altitudes of the mountains and flow in a general westerly direction through deep canyons to the valley lands below. Not only do they supply water for domestic purposes to towns and cities and for irrigation to money-making farms, but they offer unlimited opportunities for electric power development. There are now several power plants in El Dorado, where electricity for many uses is generated.

MINING INDUSTRY

Since early days the mining industry has been one of great importance in El Dorado and it will probably continue so for many generations to come. The county lies on the ''mother lode'' or rich ore vein which extends through several counties on the western slope of the Sierra Nevada Mountains. In the first few years following the discovery of gold, all the streams of the county were ''worked over'' with the sluice rocker, the crude method followed by the pioneers in seeking gold. Later, deep mining on modern scientific lines was introduced and is now followed. El Dorado County has produced upwards of $150,000,000 in gold gravel alone and the source of this supply lying in the higher regions northeast and southeast of Placerville, has as yet been only partially explored.

The precious metal is not the only mineral product of the county. There are large deposits of slate, granite, lime, asbestos and other building stones and some diamonds have been found.

LUMBERING

The lumbering industry of El Dorado gives employment to hundreds of workmen and distributes thousands of dollars in wages annually. The trees cut for commercial purposes are coniferous and the wood is soft. The most important kinds are the sugar and the yellow pine, the Douglas spruce, the cedar and two varieties of fir.

There are several large lumber mills in the county. One of these is located at Pino Grand, 25 miles northeast of Placerville, and is reached by a narrow gauge railroad from Camino. At Camino are situated the lumber yards and box factory of the company.

The California Door Company's mill is located at Calder and is reached by a narrow gauge railroad from Diamond Springs, with the lumber yards at the latter place.

RESORTS

El Dorado is also a resort county. Some of the most popular summer resorts in California are found within its borders. This is particularly true of the higher altitudes of the Sierra Nevadas, where lakes and streams are numerous and fish and game are plentiful. El Dorado County, it should be added, extends over the summit of the Sierra Nevada Mountains to the boundary line of Nevada. It is approximately seventy miles long and thirty-five miles wide. About two-thirds of the total area of Lake Tahoe, one of the most celebrated mountain lakes in the world, and a spot that delights thousands of pleasure seekers during the summer months, lies in El Dorado County. Trout of many varieties abound in the mountain streams, and game, such as bear, deer, rabbit, grouse and mountain quail, is plentiful.

The State Highway, which will be the Lincoln Highway, leads from Sacramento to Lake Tahoe and passes through the full length of El Dorado County from west to east. This is one of the famous scenic highways of California. Delightful resorts are numerous along this road, which follows the course of the south fork of the American River. Good trout fishing is to be had at almost any point in this stream.

The county seat of El Dorado is Placerville. It is a progressive city with good schools, the county high school being located there.

The average rainfall of the county is from 40 to 60 inches.

EL DORADO COUNTY SUMMARY

Number of Farms Classified by Size

3 to 9 acres	26
10 to 19 acres	21
20 to 49 acres	60
50 to 99 acres	88
100 to 174 acres	212
175 to 259 acres	100
260 to 499 acres	122
500 to 999 acres	52
1,000 acres and over	35
Total	716
Total in 1900	759

Land and Farm Areas

Approximate land, acres	1,121,920
Land in farms in 1910	210,881
Land in farms in 1900	209,320
Improved land in farms in 1910	41,682
Improved land in farms in 1900	45,481
Woodland in farms	137,057
Other unimproved land	32,142

Value of All Farm Property

Total in 1910	$3,775,358
Total in 1900	2,590,574
Per cent increase 1900-1910	45.7
Land in 1910	2,343,931
Land in 1900	1,546,240
Buildings in 1910	749,745
Buildings in 1900	566,120
Implements and machinery in 1910	162,185
Implements and machinery in 1900	116,320
Domestic animals, poultry and bees in 1910	519,497
Domestic animals, poultry and bees in 1900	361,894

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	2,823
Other cows	4,338
Yearling heifers	1,683
Calves	2,154
Yearling steers and bulls	1,138
Other steers and bulls	912
Total	13,048
Value	$254,098
Horses—	
Mature horses	2,274
Yearling colts	180
Spring colts	90
Total	2,544
Value	$202,610
Asses and burros—	
Number	17
Value	$2,985

THE OLIVES OF PALESTINE AT HOME IN CALIFORNIA

EL DORADO COUNTY SUMMARY—Concluded.

Mules—	
Mature mules	93
Yearling colts	9
Spring colts	10
Total	112
Value	$10,130
Swine—	
Mature hogs	1,428
Spring pigs	973
Total	2,401
Value	$16,502
Sheep—	
Rams, ewes and wethers	1,763
Spring lambs	1,399
Total	3,162
Value	$11,580
Goats—	
Number	3,315
Value	$7,136
Total value all domestic animals	$505,041
Poultry and bees—	
Poultry of all kinds	24,308
Value	$12,667
Colonies of bees	464
Value	$1,079

Principal Crops

Description	Acres	Bushels
Corn	38	768
Oats	543	10,504
Wheat	193	3,201
Barley	50	884
Potatoes	113	18,513
Hay and forage—	Acres	Tons
Timothy alone	13	14
Timothy and clover mixed	443	466
Clover alone	234	493
Alfalfa	407	824
Other tame and cultivated grasses	447	508
Wild, salt or prairie grasses	2,535	2,191
Grains cut green	7,989	7,142
All other hay and forage	47	47
Totals	12,115	11,685

Poultry products—	
Poultry raised, number	28,499
Eggs produced, dozen	132,910
Value poultry and eggs produced	$45,411
Honey and wax —	
Honey produced, pounds	8,105
Wax produced, pounds	75
Value of honey and wax produced	696

Wool—	
Wool, fleeces shorn	3,808
Mohair and goat hair, fleeces shorn	933
Value wool and mohair produced	$3,504
Special Crops—	
Potatoes, acres	113
All other vegetables, acres	197
Orchard fruits—	Number Bearing Trees
Apples	31,929
Apricots	3,051
Cherries	3,259
Peaches and nectarines	61,800
Pears	49,672
Prunes and plums	32,764
Total	182,475
Tropical fruits—	Number Bearing Trees
Figs	587
Oranges	53
Olives	37
Total	677
Grapevines—	
Number in bearing	581,342
Small fruits—	
Strawberries, acres	5
Blackberries and dewberries, acres	11
All others, acres	7
Total, acres	23
Nuts—	Number Bearing Trees
Almonds	438
Walnuts	880
Total	1,318

Irrigation

Number of farms irrigated in 1909	244
Acres irrigated in 1909	5,122
Acreage enterprises were capable of irrigating in 1910	5,501
Acreage included in projects	20,264
Main ditches, number	56
Length, miles	285
Laterals, number	25
Length, miles	55
Cost of irrigation enterprises up to July 1, 1910	$346,939
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$63.07

Mineral Production in 1913

Substance	Amount	Value
Copper, pounds	693	$107
Gold		62,688
Silver		250
Stone industry		4,678
Total		$67,723
Number of mineral springs		5

SHASTA COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	3,858 sq. miles	Population,	12,133	17,318	18,920
County seat	Redding (city)	Population,	1,821	2,946	3,572
		Population per square mile, 4.9		Highest	Lowest
Elevation	552 feet	Temperature (1914)		109	21
Rainfall	48.37 inches	Snow			7.0 inches

The best foundation for communal prosperity is diversity of resource. A diversity of soil and climate assures a variety of agricultural, horticultural and pomological products. A diversity of industrial raw materials and forest resources invites industrial expansion. When a community embraces these, with a superabundance of water for power and irrigation, it offers a combination of advantages, rarely equalled and never excelled. These are the advantages that Shasta County at the extreme head of the Sacramento Valley possesses.

In area Shasta is the largest geographical subdivision in the Sacramento River drainage—the states of Rhode Island and Delaware could be included in this area and leave a surplus of over 750 square miles.

IRRIGATIONAL ADVANTAGES

The increasing importance of irrigation as an aid to intensive agriculture, speeding up the soil, is generally recognized. As compared with dry farming and cereal crops exclusively, intensive agriculture, fruitgrowing and diversified husbandry, has increased the annual net profit from the soil many fold. In the last analysis, water on the land is as a rule more valuable than the land itself.

According to official daily gauging records, the average annual run-off, originating within the limits of Shasta County is 8,100,000 acre feet—a valuable irrigation and power asset.

VARIETY OF RESOURCES

To utilize the power, Shasta has industrial raw materials to attract giants of capital and industry. The industrial metals, copper, iron and zinc, already highly developed and of the first magnitude in quantity; cement materials and great beds of fine quality clays; the ele-

ALMONDS AND WALNUTS
GREAT PRODUCERS

ments essential for the manufacture of commercial fertilizers, on a scale to supply the greater part of the North American continent with calcium nitrates—destined to entirely supersede the sodium nitrates of Chile; hardwood timber for the manufacture of furniture, and vast forests of commercial pine and fir for the lumberman—containing over 5,250,000,000 feet (board measure) standing commercial timber.

These resources represent the foundation for an industrial community that can not be equalled for diversity, quantity and general advantages, within a like area anywhere in the United States.

MINING INDUSTRY

In metal mining, Shasta has been in a class by itself, leading all other counties in California for the past eighteen years. The official statistics from 1897—the year when her great sulphide ore bodies were first exploited—to 1914 (last year estimated) credit the county with a total output of $99,144,777, or an average of over $5,508,000 per year.

The great industrial metal, copper, is next to iron in importance, in the work of the world. In the past eighteen years Shasta has produced 488,211,278 pounds of this metal.

To Shasta County is due the credit of the first important development on the Pacific Coast, in the production of iron ore, and the manufacture of pigiron by means of the electric furnace.

The electric furnaces at Heroult have also been utilized in the manufacture of ferro-manganese, for the steel plants of the eastern portion of the United States. Here are grouped the iron ores, the elements essential in the manufacture of special steel, and a million horsepower of potential energy—the basis for the upbuilding of another Pittsburgh.

AGRICULTURAL PURSUITS

Deciduous fruit is grown on an extensive scale in the lower valleys and foothills. The culture of the prune is predominant, with peaches and pears a close second.

The olive, one of the most stable orchard products, has demonstrated its superiority in Shasta County. Hundreds of contiguous acres are now planted to olive groves, and one of the largest groves in the State, containing 120 acres, planted more than twenty years ago, is also one of the most prolific in the State.

No climatic reason exists why oranges should not be grown successfully, as the isothermal zone of the Central California valleys extends to the vicinity of Redding. Trees a score of years old, planted chiefly for ornamental purposes, attest the feasibility of citrus culture.

Cereals of all kinds are grown in the main valley—especially in the Churn Creek Bottoms—and in the mountain valleys of northeastern Shasta. A greater area is being devoted from year to year, to alfalfa, with the increase of irrigation—although three crops are usually cut without irrigation—and dairying and stock-raising are on the increase.

CITIES AND TOWNS

Shasta County contains a number of thriving cities and towns. Redding is the county seat, a beautifully located city of about four thousand people, at the extreme head of the Sacramento Valley, where mountain and vale meet. It is the natural distributing center for a large area of Northern California, the center of industrial development, with large and prosperous business houses, excellent hotels, etc., up-to-date schools, including Shasta County high school, churches of various denominations, and all the more prominent fraternal organizations.

The thriving towns of Anderson and Cottonwood are the chief fruit centers of Shasta, and thousands of tons of fruit, as well as agricultural products and livestock, are shipped annually from these points.

TRANSPORTATION

The county is traversed by many good roads, and the streams are bridged with creditable permanent structures. The California State Highway is under construction, through the heart of Shasta, and State Highway laterals, into Trinity County to the west, connecting with the main trunk road at Redding, have been provided for.

Shasta has excellent main line railroad facilities, with expansion in feeders and other main line construction assured in the near future.

RIVERS AND MOUNTAINS

The beautiful in nature is blended with the utilitarian, in Shasta County. In the Sacramento Canyon, enchanting vistas of Mount Shasta and the stately domes and spires of the Castle Crags offer an everchanging panorama of indescribable grandeur, through verdant mountain recesses cut by the crystal river.

The beautiful McCloud in all its pristine glory, where the gamey trout abounds, and the timid doe or stately buck emerge from their leafy lanes along the river's brink or mountain glades. The rugged gorges of the Pit, where majesty and power impress the visitor. Beautiful Burney, the misty, mystic falls that tumbles over lava cliffs a hundred feet and more, to greet the onrush of the river—all these inspire.

But Nature, not content with her lavish bestowal of the majestic and beautiful, essays a new wonder—the awe-inspiring eruption of Mount Lassen. In a region of fantastical natural features, the mountain long quiescent now holds the center of the stage. Unique, as the only active crater in continental United States—remote from centers of population, that the release of its pent-up energies may fall harmless—it presents a spectacular climax in its periodical eruptions, forcing a mighty column of steam and volcanic ejecta, two miles and more in the air.

SHASTA COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	6
3 to 9 acres	16
10 to 19 acres	29
20 to 49 acres	103
50 to 99 acres	111
100 to 174 acres	300
175 to 259 acres	96
260 to 499 acres	190
500 to 999 acres	93
1,000 acres and over	66
Total	1,010
Total in 1900	1,221

Land and Farm Areas

Approximate land, acres	2,469,120
Land in farms in 1910	389,218
Land in farms in 1900	347,120
Improved land in farms in 1910	96,217
Improved land in farms in 1900	86,540
Woodland in farms	151,113
Other unimproved land	141,888

Value of All Farm Property

Total value in 1910	$7,847,929
Total value in 1900	4,420,423
Per cent increase 1900-1910	77.5
Land in 1910	5,403,079
Land in 1900	2,980,620
Buildings in 1910	851,750
Buildings in 1900	538,500
Implements and machinery in 1910	289,511
Implements and machinery in 1900	163,450
Domestic animals, poultry and bees in 1910	1,303,589
Domestic animals, poultry and bees in 1900	737,853

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	2,923
Other cows	15,433
Yearling heifers	3,678
Calves	3,308
Yearling steers and bulls	3,197
Other steers and bulls	5,580
Total	34,119
Value	$677,694
Horses—	
Mature horses	4,516
Yearling colts	488
Spring colts	213
Total	5,217
Value	$396,414
Mules—	
Mature mules	224
Yearling colts	57
Spring colts	13
Total	294
Value	$23,225
Asses and burros—	
Number	23
Value	$2,635

SHASTA COUNTY SUMMARY—Concluded.

Swine—	
Mature hogs	12,832
Spring pigs	5,968
Total	18,800
Value	$96,329
Sheep—	
Rams, ewes and wethers	11,449
Spring lambs	5,574
Total	17,023
Value	$44,945
Goats—	
Number	18,403
Value	$41,501
Total value all domestic animals	$1,282,743
Poultry and bees—	
Poultry of all kinds	35,873
Value	$19,226
Colonies of bees	689
Value	$1,620

Principal Crops

Description	Acres	Bushels
Corn	163	4,655
Oats	723	8,915
Wheat	3,783	45,022
Barley	1,298	21,551
Dry edible beans	49	685
Potatoes	243	27,756
Hay and forage—	Acres	Tons
Timothy alone	3,083	4,118
Timothy and clover mixed	2,165	2,847
Clover alone	269	530
Alfalfa	6,698	16,874
Other tame and cultivated grasses	917	1,077
Wild, salt or prairie grasses	13,158	12,716
Grains cut green	8,525	7,836
All other hay and forage	526	580
Total	35,341	46,578

Poultry products—	
Poultry raised, number	52,607
Eggs produced, dozen	199,858
Value poultry and eggs produced	$73,767
Honey and wax—	
Honey produced, pounds	8,466
Wax produced, pounds	185
Value of honey and wax produced	$1,013
Wool—	
Wool, fleeces shorn	17,862
Mohair and goat hair, fleeces shorn	11,606
Value wool and mohair produced	$25,705

Orchard fruits—	Number Bearing Trees
Apples	35,440
Apricots	839
Cherries	2,785
Peaches and nectarines	98,950
Pears	33,952
Prunes and plums	87,959
Total	259,925

Tropical fruits—	Number Bearing Trees
Figs	2,306
Lemons	7
Oranges	55
Olives	9,616
Total	11,984
Grapevines—	
Number in bearing	117,481

Nuts—	Number Bearing Trees
Almonds	8,056
Pecans	7
Walnuts	1,168
Total	9,231

Irrigation

Number of farms irrigated in 1909	639
Acres irrigated in 1909	33,004
Acreage enterprises were capable of irrigating in 1910	36,564
Acreage included in projects	72,653
Main ditches, number	446
Length, miles	678
Laterals, number	130
Length, miles	81
Flowing wells, number	2
Pumped wells, number	34
Cost of irrigation enterprises up to July 1, 1910	$430,766
Average cost per acre irrigation enterprises were capable of irrigating in 1910	11.78

Mineral Production in 1913

Substance	Amount	Value
Asbestos, tons	47	$1,175
Brick, thousand	360	4,330
Chromite, tons	280	2,800
Copper, pounds	27,688,436	4,291,708
Gold		1,208,870
Lead, pounds	19,070	839
Lime, barrels	8,595	7,030
Limestone, tons	41,346	35,616
Mineral water, gallons	30,000	6,850
Pyrite, tons	72,971	194.409
Silver		448,031
Other minerals		10,686
Total		$6,212,344
Number of mineral springs		16

TEHAMA COUNTY

Date of creation, April 9, 1856.

			1890	1900	1910
Land area	2,893 sq. miles	Population	9,916	10,996	11,401
County seat, Red Bluff (city)		Population	2,608	2,750	3,530

Population per square mile, 3.9

			Highest	Lowest
Elevation	307 feet	Temperature (1914)	108	28
Rainfall	27.51 inches	Snow		....

Stretching across the great Sacramento Valley from the Sierra Nevada Mountains on the east to the Coast Range on the west, lies Tehama County. It has a diversified topography, ranging from river bottom lands to high mountains.

The county is bisected by the Sacramento River, which crosses it from north to south. On both sides of the river beyond the river bottoms are great areas of table lands, locally called bench lands, which, when irrigated, are unexcelled for the production of deciduous and citrus fruits, berries, nuts, etc. Water is plentiful for irrigation, both by gravity canals and from wells. During recent years a number of wells have been sunk and it has been ascertained that at depths ranging from 20 to 250 feet, a bountiful supply of pure water is to be had.

AGRICULTURE AND HORTICULTURE

Tehama County is now attracting great attention. In former years most of the agricultural land in the county was held in great acreages and farmed to grain or used for stock raising. For that reason, Tehama County has always been an important grain and wool center. In recent years, however, some of these great tracts have been broken up and are now being subdivided into small farms. Scientific methods of soil culture are being introduced and the county is undergoing a change. The great farms of 10,000 or more acres will soon pass forever from view and in their places will be hundreds of small tracts devoted to the culture of alfalfa, fruit, poultry, truck gardening, berries, etc. As forerunners of the new era are the prosperous colonies of Corning and Los Molinos, where there are hundreds of new settlers making good on their recent purchases.

The fruit industry in Tehama gives employment to a large number of persons during the season and the annual value of the crop exceeds $1,000,000. The bulk of the deciduous fruit crop is dried, although many carloads are shipped to Eastern markets in the fresh state. One of the best paying Bartlett pear ranches in California is on the Cone Ranch, near Red Bluff. Peaches are also grown extensively and profitably, as are prunes and apricots. Since the introduction of the blastophaga in California, the insect which fertilizes the Smyrna fig, the culture of figs promises to become a paying industry. Almonds are produced and in twenty years in which they have been grown in the county, there has never been a total crop failure. Walnuts are a paying crop.

Oranges and lemons do well and bear abundantly. The olive is also in great favor as a crop, especially in the vicinity of Corning, where there is a large pickling plant and oil factory. Apples are grown in the foothills. At Manton, thirty-five miles northeast of Red Bluff, the county seat, very fine apples are grown.

Grain is still produced in great quantities. Wheat, barley and oats are produced and much hay is grown.

Dairying is becoming an important industry and the opportunities along this line are hardly touched. Alfalfa grows abundantly and is the best food for dairy cows. There are several creameries in the county, which take the cream output from the farmers, paying cash for the product.

TRUCK GARDENS, A SURE SOURCE OF INCOME

Beef cattle and sheep are raised extensively, the grazing land being the finest. The ranges on the hill slopes provide excellent feed all during the summer and fall months.

IRRIGATIONAL ADVANTAGES

Tehama County has always attracted the attention of the officials of the United States Reclamation Service because it holds the key to irrigation of thousands of acres of Sacramento Valley lands. In the Sacramento River, just above Red Bluff is Iron Canyon, a natural dam site, where it is proposed to erect a dam for the purpose of storing sufficient water to irrigate much of the Sacramento Valley lands. The proposition is now being investigated by the Government.

TRANSPORTATION

The main line of the Oregon and California branch of the Southern Pacific Railroad passes through Tehama County, affording the best of rail transportation facilities. The West Side Electric Railway will have its northern terminal at Red Bluff. The State Highway passes through the county, connecting the principal communities, and the Sacramento River is navigable for trade boats as far north as Red Bluff.

The natural scenery of the county is beautiful. Red Bluff is one of the starting points for tourists who visit Mt. Lassen, an active volcano, which has been in a state of eruption at various intervals since June, 1914. Although the slopes of Mt. Lassen extend into Tehama County, the peak is just beyond the borders in Shasta County.

Game is plentiful in the foothill and mountain sections and all the streams are stocked with trout.

Tehama County has good district schools and two excellent high schools—one at Red Bluff and one at Corning—where students are prepared for the universities.

LEADING CITIES AND TOWNS

Red Bluff, the county seat and largest city, is an attractive place with many pretty homes. It is a business center, being the clearing house through which most of the products of the county are marketed and the supply point for a large territory. It has wide streets, is well lighted and well drained. It has two fruit packing establishments, a creamery, three newspapers, several banks, large lumber yards and other important industries.

Corning, the second city in size, is incorporated. It is the center of a prosperous farming colony. Fruit growing and poultry raising are its chief industries. Corning is destined to be the center of one of the greatest olive growing districts in California. A large pickling and olive oil plant has been established by H. G. Heinz at Corning.

Tehama, at the junction of the two lines of the Southern Pacific Railroad, is in the center of a rich farming section.

Other towns in the county are Los Molinos, Vina, where the farm of the Stanford University is located, Paskenta, Henleyville, Manton, Lyonsville, Kirkwood, Proberta and Red Bank.

The climate of Tehama is temperate. The winters are mild, snow seldom falling except in the mountains. While the temperature sometimes exceeds 100 degrees in summer, the heat is dry and not oppressive. It is the kind of heat that ripens the fruit crop and puts profits in the pockets of the farmers.

TEHAMA COUNTY SUMMARY

Number of Farms Classified by Size	
Under 3 acres	7
3 to 9 acres	34
10 to 19 acres	119
20 to 49 acres	198
50 to 99 acres	102
100 to 174 acres	151
175 to 259 acres	51
260 to 499 acres	119
500 to 999 acres	86
1,000 acres and over	139
Total	1,006
Total in 1900	1,055
Land and Farm Areas	
Approximate land, acres	1,851,520
Land in farms in 1910	915,227
Land in farms in 1900	950,763
Improved land in farms in 1910	186,642
Improved land in farms in 1900	269,693
Woodland in farms	206,234
Other unimproved land	522,351
Value of All Farm Property	
Total value in 1910	$16,821,178
Total value in 1900	16,030,104
Per cent increase 1900-1910	4.9
Land in 1910	12,932,446
Land in 1900	11,720,120
Buildings in 1910	1,234,375
Buildings in 1900	2,091,860
Implements and machinery in 1910	494,932
Implements and machinery in 1900	440,020
Domestic animals, poultry, and bees in 1910	2,159,425
Domestic animals, poultry, and bees in 1900	1,778,104
Domestic Animals on Farms and Ranges	
Cattle—	
Dairy cows	3,462
Other cows	10,691
Yearling heifers	2,646
Calves	3,520
Yearling steers and bulls	2,590
Other steers and bulls	2,400
Total	25,309
Value	$512,747
Horses—	
Mature horses	5,073
Yearling colts	525
Spring colts	278
Total	5,876
Value	$464,472
Asses and burros—	
Number	23
Value	$7,880
Mules—	
Mature mules	1,409
Yearling colts	163
Spring colts	103
Total	1,675
Value	$171,979
Swine—	
Mature hogs	10,915
Spring pigs	4,025
Total	14,940
Value	$75,941
Sheep—	
Rams, ewes, and wethers	185,023
Spring lambs	112,713
Total	297,736
Value	$850,456
Goats—	
Number	28,473
Value	$36,325
Total value all domestic animals	$2,119,800
Poultry and bees—	
Poultry of all kinds	59,852
Value	$37,989
Colonies of bees	786
Value	$1,636

TEHAMA COUNTY SUMMARY—Concluded.

Principal Crops

Description	Acres	Bushels
Corn	100	2,613
Oats	1,032	28,138
Wheat	6,090	84,009
Barley	11,402	177,518
Dry edible beans	10	202
Potatoes	112	13,048
Hay and forage—	Acres	Tons
Timothy alone	40	45
Timothy and clover mixed	265	226
Clover alone	52	102
Alfalfa	8,387	28,332
Other tame and cultivated grasses	258	272
Wild, salt, or prairie grasses	2,184	1,844
Grains cut green	13,157	13,218
Totals	24,343	44,039

Poultry products—	
Poultry raised, number	96,134
Eggs produced, dozen	306,452
Value poultry and eggs produced	$149,168
Honey and wax—	
Honey produced, pounds	15,779
Wax produced, pounds	115
Value of honey and wax produced	$1,198
Wool—	
Wool, fleeces shorn	336,373
Mohair and goat hair, fleeces shorn	36,119
Value wool and mohair produced	$349,689
Special crops—	
Potatoes, acres	112
Sweet potatoes, acres	30
All other vegetables, acres	292
Orchard fruits—	Number Bearing Trees
Apples	15,633
Apricots	30,446
Cherries	624
Peaches and nectarines	260,204
Pears	41,584
Prunes and plums	92,459
Total	440,950
Tropical fruits—	Number Bearing Trees
Figs	3,176
Lemons	356
Oranges	10,744
Pomelos	5
Olives	17,373
Total	31,654
Small fruits—	
Strawberries, acres	36
Blackberries and dewberries, acres	7
All others, acres	6
Total	49
Grapevines—	
Number in bearing	1,307,218
Nuts—	Number Bearing Trees
Almonds	32,919
Pecans	10
Walnuts	1,569
Total	34,498

Irrigation

Number of farms irrigated in 1909	366
Acres irrigated in 1909	14,281
Acreage enterprises were capable of irrigating in 1910	23,167
Acreage included in projects	36,020
Main ditches, number	136
Length, miles	164
Laterals, number	41
Length, miles	40
Flowing wells, number	1
Pumped wells, number	141
Cost of irrigation enterprises up to July 1, 1910	$263,055
Average cost per acre irrigation enterprises were capable of irrigating in 1910	11.35

Mineral Production in 1913

Substance	Amount	Value
Brick, thousand	300	$1,800
Mineral water, gallons	75	42
Stone industry	.....	600
Total		$2,442
Number of mineral springs		11

GLENN COUNTY

Date of creation, March 11, 1891.

			1890	1900	1910
Land area	1,259 sq. miles	Population	....	5,150	7,172
County seat	Willows (town)	Population	1,176	893	1,139

Population per square mile, 5.7

			Highest	Lowest
Elevation	136 feet	Temperature (1914)	111	27
Rainfall	21.31 inches	Snow		....

LOCATION AND DESCRIPTION

Glenn County lies in the west central portion of the Sacramento Valley. Its eastern boundary for the most part is the Sacramento River, and its western line extends into the Coast Range Mountains. It is about thirty miles wide with an average length of about fifty miles, and contains one million acres of land.

The eastern half of the county lies in the valley proper and is level and adapted to farming of all kinds. About midway between the eastern and western boundaries, the land becomes broken by low rolling hills, which increase in altitude as they near the western line, until they become the Coast Range Mountains. The foothills and rolling land is adapted to grain and fruit growing, much of it being cropped. In the higher altitudes there is a great area of fine grazing land, also numerous small valleys, which are exceedingly productive. The mountains are clothed with forests of merchantable timber.

The county has undergone rapid development during the past ten years. Great farms of 10,000 acres or more, which were formerly cropped only to grain have been and are now being subdivided and sold in small tracts to newcomers. Thousands of new families have settled in the county and new methods of farming and new crops have been introduced. Irrigation has been practiced and has wrought wonderful changes. Alfalfa has to a large extent taken the place of grain, and dairying and stock raising have become important and profitable industries.

GREAT IRRIGATION PROJECTS

One of the most successful irrigation projects ever carried to completion under the supervision of the United States Reclamation Service, is in Glenn County. This is the Orland Project which will irrigate 21,000 acres of land near Orland, a rich section in the northern part of the county. The system was built and is now managed by the United States Government. Eventually it will belong to the land owners benefited, as they are paying the Government the cost of construction in ten equal yearly payments. Under the law governing the project no land owner can hold more than 160 acres within the project. Wonderful prosperity has followed the completion of this system. The water is taken from Stony Creek, a tributary of the Sacramento River.

Thousands of acres in Glenn are irrigated by the Sacramento Valley Irrigation Company, which takes water from the Sacramento River and conveys it by canals to the fertile farms, consisting of about 200,000 acres. Deep well irrigation is also followed, there being an abundant subterranean supply.

Artesian water has been developed at Germantown in great quantities at a distance of about 500 or 600 feet which adds materially to the irrigation of the uplands.

DIVERSITY OF CROPS

In former years Glenn was noted for its great yields of barley and wheat. While it still produces quantities of these important grains, much of its best land has recently been planted to other and more profitable crops. The planting of fruit trees has been particularly heavy during the past few years. These new orchards include all varieties of deciduous and citrus fruits and nuts. Indeed, Glenn County has been selected by the James Mills Orchard Company for a plantation of 10,000 acres devoted exclusively to citrus fruits. The planting of this orchard has been under way for several seasons and when it is completed, it will be the largest citrus fruit grove in the world. The deciduous fruits produced include all the standard profitable varieties of the Sacramento Valley, which are the apricot, cherry, peach, plum, prune, pear and grape. Berries of all kinds are also grown, and as stated in a preceding paragraph, alfalfa is an important crop. It is one of the best crops to engage the attention of a newcomer.

The production of sugar beets has been found profitable in Glenn. There is a large sugar factory at Hamilton, in the northern part of the county and it is supplied with beets grown in this and neighboring counties. Beets produce heavily on the river lands and on the uplands when irrigated.

IN THE INTELLIGENT TILLING OF THE SOIL LIES CALIFORNIA'S GREATEST WEALTH

Broom corn is another crop that is grown extensively along the river lands. It yields about 100,000 pounds to the acre and pays well.

Glenn is also one of the counties of the Sacramento Valley that has land within its borders suited to the culture of rice. Rice has been grown successfully here for several seasons.

English walnuts and almonds are both paying crops and there is a large acreage in the county suited to the successful culture of the olive.

Stock raisers and poultry raisers find unsurpassed natural conditions here. In the northern part of the county there are many farms devoted exclusively to the raising of turkeys.

Vegetables of practically all kinds are produced and find ready markets in the large California cities.

TRANSPORTATION FACILITIES

Glenn has excellent rail and water transportation facilities. The main line of the Southern Pacific Company passes through the county from north to south and a branch road serves the river districts of the county. The West Side Eletcric Line, when completed, will pass through the county. The Sacramento River, which separates Glenn from Butte, is navigable the year round.

CITIES AND TOWNS

The principal city and county seat is Willows, a growing community situated near the geographical center of the county on the main line of the Southern Pacific Company. Willows is lighted by electricity, has a good water and sewer system. It has good business buildings and large stores. One of the county's high schools is located here.

Orland is another growing community in the northern part of the county. It is in the center of the Orland Irrigation Project, previously mentioned. It is out of the frost belt and noted for its almonds and a rapidly growing and profitable citrus industry.

Hamilton is on the Southern Pacific branch road. It is in the center of the beet growing districts and is the location of a large sugar factory.

Germantown is in the center of a rich farming district in the valley section of the county. Other important towns are Butte City, on the Sacramento River, Elk Creek, in the foothills, and Norman, on the Southern Pacific Railroad.

Glenn offers excellent opportunities for new settlers. Land is cheap, when its productive capacity is taken into consideration, and water for irrigation is abundant.

GLENN COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	..
3 to 9 acres	40
10 to 19 acres	33
20 to 49 acres	106
50 to 99 acres	65
100 to 174 acres	79
175 to 259 acres	31
260 to 499 acres	101
500 to 999 acres	89
1,000 acres and over	119
Total	663
Total in 1900	529

Land and Farm Areas

Approximate land, acres	805,760
Land in farms in 1910	491,198
Land in farms in 1900	577,363
Improved land in farms in 1910	309,765
Improved land in farms in 1900	355,781
Woodland in farms	67,665
Other unimproved land	113,768

Value of All Farm Property

Total value in 1910	$16,581,419
Total value in 1900	10,299,300
Per cent increase 1900-1910	61.0
Land in 1910	13,425,220
Land in 1900	8,473,830
Buildings in 1910	1,110,215
Buildings in 1900	719,510
Implements and machinery in 1910	390,333
Implements and machinery in 1900	299,620
Domestic animals, poultry and bees in 1910	1,655,651
Domestic animals, poultry and bees in 1900	806,340

Domestic Animals on Farms and Ranges

Cattle*—	
Dairy cows	3,688
Other cows	3,601
Yearling heifers	1,410
Calves	2,409
Yearling steers and bulls	1,925
Other steers and bulls	2,051
Total	15,084
Value	*$365,093
Horses—	
Mature horses	3,319
Yearling colts	339
Spring colts	262
Total	3,920
Value	$357,207
Mules—	
Mature mules	3,033
Yearling colts	207
Spring colts	122
Total	3,362
Value	$407,327
Asses and burros—	
Number	29
Value	$17,625
Swine—	
Mature hogs	12,483
Spring pigs	5,827
Total	18,310
Value	$106,475
Sheep—	
Rams, ewes and wethers	70,210
Spring lambs	41,153
Total	111,363
Value	$363,893
Goats—	
Number	2,813
Value	$5,976
Total value of all domestic animals	$1,623,596
Poultry and bees—	
Poultry of all kinds	50,336
Value	$30,715
Colonies of bees	420
Value	$ 1,340

Principal Crops

Description	Acres	Bushels
Corn	671	21,999
Oats	1,283	32,620
Wheat	17,541	232,911
Barley	53,513	1,002,587
Kaffir corn and milo maize	162	4,972
Dry edible beans	....	....
Potatoes	24	1,435
Hay and forage—	Acres	Tons
Timothy alone	6	8
Timothy and clover mixed	18	22
Clover alone	5	4
Alfalfa	3,211	10,848
Other tame and cultivated grasses	799	1,045
Wild, salt or prairie grasses	265	198
Grains cut green	20,824	25,332
All other hay and forage	15	137
Totals	25,143	37,594

Poultry products—	
Poultry raised, number	67,529
Eggs produced, dozen	252,286
Value poultry and eggs produced	$110,010
Honey and wax—	
Honey produced, pounds	10,982
Wax produced, pounds	250
Value of honey and wax produced	$1,194
Wool—	
Wool, fleeces shorn	131,612
Mohair and goat hair, fleeces shorn	5,177
Value wool and mohair produced	$101,749

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*Includes animals, age or sex not specified.

GLENN COUNTY SUMMARY—Concluded.

Special crops—	
Potatoes, acres	24
Sweet potatoes, acres	1
All other vegetables, acres	115
Sugar beets, acres	1,264

Orchard fruits—	Number Bearing Trees
Apples	4,617
Apricots	6,830
Cherries	78
Peaches and nectarines	6,420
Pears	1,655
Prunes and plums	24,860
Total	44,460

Tropical fruits—	Number Bearing Trees
Figs	879
Lemons	593
Oranges	4,860
Pomelos	5
Olives	445
Total	6,782

Grapevines—	
Number in bearing	20,416

Small fruits—	
Strawberries, acres	2
Blackberries and dewberries, acres	4
All others, acres	2
Total	8

Nuts—	Number Bearing Trees
Almonds	25,739
Pecans	15
Walnuts	220
Total	25,974

Irrigation

Number of farms irrigated in 1909	196
Acres irrigated in 1909	5,661
Acreage enterprises were capable of irrigating in 1910	16,804
Acreage included in projects	220,664
Main ditches, number	50
Length, miles	136
Laterals, number	554
Length miles	1,073
Flowing wells, number	....
Pumped wells, number	105
Cost of irrigation enterprises up to July 1, 1910	$1,519,561
Average cost per acre irrigation enterprises were capable of irrigating in 1910	90.43

COLUSA COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	1,140 sq. miles	Population	14,640	7,364	7,732
County seat	Colusa (town)	Population	1,336	1,441	1,582

Population per square mile, 6.8

			Highest	Lowest
Elevation	60 feet	Temperature (1914)	104	28
Rainfall	7.17 inches	Snow		....

Colusa County lies in the west central portion of the Sacramento Valley. It consists of valley and foothill lands, the western boundary extending into the Coast Range Mountains. Butte Creek and the Sacramento River mark the eastern boundary of the county. The Sacramento River runs in a southerly direction through the county for a distance of about twenty miles. All the land along the river is wonderfully rich and is planted to alfalfa and orchard. A few miles back from the river is a large area of fertile plain land reaching to the foothills, farmed mainly to grain and held for the most part in great tracts. There are about 450,000 acres of agricultural land and 60,000 acres of mountain land in the county. The balance is classed as grazing land and lies on the east slope of the Coast Range.

The foothills of Colusa do not contain much commercial timber, though there is some good pine in the higher sections. A small oak grows in the foothills valuable for fuel and there is but little brush. There are many small, pretty and fertile valleys in the westward lying hills. They are mostly occupied by attractive farms. Small streams are numerous in these valleys and furnish water for irrigation. The soil on the hill slopes is productive and in the higher elevations there is much good apple land. The rounded hills are suited for grapes and, if irrigated, for deciduous and citrus fruits.

The depth of the soil of the river and plain lands is almost incredible. An unusually deep well five miles out from the city of Colusa, showed no bedrock at 288 feet. It is believed that in many places a depth of 1,500 feet could be shown. The Valley of the Nile shows no better soil.

Climatic conditions are about the same as those of other counties of the Sacramento Valley. The temperature is not excessive in summer and the winter is characterized by the fall of ample rain to assure sufficient moisture for all cereal crops. The average annual precipitation is about 26 inches and while successful farming is done without irrigation, the tendency during the past few years is to irrigate and thus get the maximum production from the land. Irrigation in the county is done by gravity canals and by deep wells. In almost any part of the county ample water can be found by sinking wells. This source of supply has never failed, even during the dryest seasons. The lands along the Sacramento River do not need irrigation for ordinary crops. These lands are very productive; the soil is silty and easily worked.

VARIETY OF CROPS

Much of the land of Colusa is farmed to wheat and barley, which a quarter of a century ago was the chief crop. In recent years, however, many new settlers have been buying farms and they have been introducing diversified crops. Alfalfa is becoming an important crop and in some sections, where water is not far beneath the surface of the ground, it is grown without irrigation. Stock raising has followed alfalfa growing and there are many dairies and several creameries and skimming stations in the county.

RICE

A large acreage in Colusa County is devoted to the culture of rice, which produces heavily on certain irrigated lands. In 1914 the yield was 150,000 sacks. Rice pays well and it is sure to become one of the important crops of Colusa.

DECIDUOUS FRUITS

Every kind of deciduous fruit grows to perfection in Colusa. Prune growing is particularly profitable. The

CALIFORNIA'S DIVERSITY OF CROPS—THE WONDER OF THE WORLD

orchards produce a fine grade of drying prune and the climatic conditions are ideal for curing this fruit in the sun during the cloudless summer days. Peaches, pears, cherries, apricots, figs and grapes grow to perfection and excellent raisins are produced.

ALMONDS

The almond is an important product of Colusa. Certain favored sections on the higher plain lands are ideal for the almond. These lands are in a practically frostless belt and there is little danger of injury to the almond crop by cold nights, after the blossoming time in the early spring.

CITRUS FRUITS

The lands of Colusa are also well adapted to the culture of citrus fruits. During the past few years thousands of acres have been planted to lemon and orange trees by a single company of Southern California capitalists. After a thorough investigation as to climatic and soil conditions, these capitalists planted thousands of acres of foothill lands to citrus trees. When these groves reach maturity, oranges will be one of the chief fruits shipped out of the county. Oranges have been grown in small groves for a quarter of a century, but it was only recently that planting has been done on an extensive scale. Colusa oranges ripen in the latter part of October and in November.

TRANSPORTATION

Transportation facilities in Colusa are excellent. The main line of the Southern Pacific traverses the county from north to south, affording direct passenger and freight service with Sacramento and San Francisco. The Southern Pacific also operates a branch line through the rich sections that are not served by the main line. The Northern Electric operates a branch electric line from Marysville in Yuba County, to Colusa. This line makes connections at Marysville for all points on the east side of the Sacramento Valley. Cheap water transportation on the Sacramento River is available for all non-perishable products. The new west side electric road, which at this writing is in course of construction, will pass through Colusa County, giving transportation facilities to sections not before served by a road.

There has been a marked growth in Colusa County during recent years. This has been due in a large measure to the fact that the great grain ranches of former years are gradually being subdivided and sold in small tracts to new settlers. Irrigation has also played an important part in the development of the lands of the county, and cheap electric power has been a factor in irrigation development.

While the county is not noted for its mineral production, still, it possesses some valuable mineral lands. The foothills of the Coast Range yield a blue sandstone which is valuable for building purposes. Mineral springs, from which flow waters valued for their curative powers, are numerous in the higher foothill sections.

Colusa, a pretty little city of 3,000 inhabitants, is the seat of the county government. It has good schools and churches and excellent business and county buildings. Other leading towns, which are centers of farming districts, are Maxwell, Williams, Arbuckle, College City and Princeton.

COLUSA COUNTY SUMMARY

Number of Farms Classified by Size	
Under 3 acres	1
3 to 9 acres	31
10 to 19 acres	35
20 to 49 acres	85
50 to 99 acres	42
100 to 174 acres	90
175 to 259 acres	30
260 to 499 acres	129
500 to 999 acres	104
1,000 acres and over	120
Total	667
Total in 1900	582
Land and Farm Areas	
Approximate land, acres	729,600
Land in farms in 1910	522,376
Land in farms in 1900	550,002
Improved land in farms in 1910	336,509
Improved land in farms in 1900	358,227
Woodland in farms	38,252
Other unimproved land	147,615
Value of All Farm Property	
Total in 1910	$19,602,208
Total in 1900	13,054,483
Per cent increase 1900-1910	50.2
Land in 1910	16,066,035
Land in 1900	10,885,350
Buildings in 1910	1,204,780
Buildings in 1900	838,420
Implements and machinery in 1910	419,557
Implements and machinery in 1900	417,690
Domestic animals, poultry, and bees in 1910	1,911,836
Domestic animals, poultry, and bees in 1900	913,023
Domestic Animals on Farms and Ranges	
Cattle—	
Dairy cows	3,128
Other cows	6,571
Yearling heifers	2,140
Calves	2,606
Yearling steers and bulls	1,556
Other steers and bulls	2,619
Total	*18,620
Value	*$429,618
Horses—	
Mature horses	3,992
Yearling colts	481
Spring colts	259
Total	4,732
Value	$428,700
Mules—	
Mature mules	4,607
Yearling colts	437
Spring colts	247
Total	5,291
Value	$629,345
Asses and burros—	
Number	65
Value	$15,275
Swine—	
Mature hogs	17,646
Spring pigs	10,418
Total	28,064
Value	$161,174
Sheep—	
Rams, ewes, and wethers	39,801
Spring lambs	24,791
Total	64,592
Value	$202,703
Goats—	
Number	2,154
Value	$7,271
Total value of all domestic animals	$1,874,086
Poultry and bees—	
Poultry of all kinds	61,113
Value	$33,372
Colonies of bees	1,406
Value	$ 4,378

Principal Crops

Description	Acres	Bushels
Corn	706	16,619
Oats	771	12,556
Wheat	11,168	221,549
Barley	89,985	1,949,223
Kaffir corn and milo maize	2,598	48,418
Dry edible beans	1,083	20,087
Potatoes	439	28,391
Hay and forage—	Acres	Tons
Timothy alone	225	305
Timothy and clover mixed	160	191
Clover alone	10	20
Alfalfa	4,242	14,472
Other tame and cultivated grasses	70	85
Wild, salt, or prairie grasses	568	552
Grains cut green	24,221	29,047
All other hay and forage	85	1,107
Total	29,581	45,779

Poultry products—	
Poultry raised, number	73,034
Eggs produced, dozen	249,229
Value poultry and eggs produced	$92,466

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*Includes animals, age or sex not specified.

CALIFORNIA'S LATEST ACHIEVEMENT, THE SUCCESSFUL GROWING OF RICE, THE WORLD'S GREATEST CEREAL

COLUSA COUNTY SUMMARY—Continued

Honey and wax—	
Honey produced, pounds	67,689
Wax produced, pounds	798
Value of honey and wax produced	$5,790

Special crops—	
Potatoes, acres	439
Sweet potatoes, acres	6
All other vegetables, acres	160
Sugar beets, acres	211

Wool—	
Wool, fleeces shorn	73,221
Mohair and goat hair, fleeces shorn	4,009
Value wool and mohair produced	$56,620

Orchard fruits—	Number Bearing Trees
Apples	3,067
Apricots	4,420
Cherries	223
Peaches and nectarines	4,075
Pears	2,432
Prunes and plums	57,468
Total	71,685

Tropical fruits—	Number Bearing Trees
Figs	1,391
Lemons	199
Oranges	1,537
Pomelos	70
Olives	336
Total	3,533

Grapevines—	
Number in bearing	482,417

Small fruits—	
Strawberries, acres	1
Blackberries and dewberries, acres	5
All others, acres	1
Total	7

Nuts—	Number Bearing Trees
Almonds	16,078
Pecans	10
Walnuts	1,306
Total	17,394

COLUSA COUNTY SUMMARY—Concluded

Irrigation

Number of farms irrigated in 1909	112
Acres irrigated in 1909	4,276
Acreage enterprises were capable of irrigating in 1910	16,541
Acreage included in projects	18,783
Main ditches, number	38
Length, miles	44
Laterals, number	10
Length, miles	7
Pumped wells, number	3
Cost of irrigation enterprises up to July 1, 1910	$76,112
Average cost per acre irrigation enterprises were capable of irrigating in 1910	4.60

BUTTE COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	1,722 sq. miles	Population,	17,939	17,117	27,301
County seat	Oroville	Population,	....	....	3,859

Population per square mile, 15.9

			Highest	Lowest
Elevation	250 feet	Temperature (1914)	109	29
Rainfall	26.24 inches	Snow	....	

Butte County is situated on the east side of the great Sacramento Valley. Its boundaries extend from the Sacramento River on the west to the higher altitudes of the Sierra Nevada Mountains on the east and hence it embodies within its confines every variety of scenery, valley, foothill and mountain.

The Sacramento River, which forms the county's western boundary, is California's largest stream and is navigable by river steamers throughout the year. Other important streams that traverse Butte are the Feather (and its branches), Butte Creek, Chico Creek and Honcut Creek, all of which rise in the Sierra Nevadas and flow through the county into the Sacramento. The Feather River is a large stream and drains an area of approximately 4,000 square miles, furnishing numerous sites for power plants and irrigation dams. Its scenic beauty has made it world famous.

PRODUCTS

The products of Butte County are many, in fact, its soil will produce practically every variety of crop that can be grown in California. The list of products includes cereals of all kinds, hay, deciduous and citrus fruits, nuts, grapes, berrries, melons, vegetables, sugar beets, hemp, flax, hops, forest products, gold and other minerals. The fruits principally grown for market are oranges, olives, figs, peaches, pears, prunes, plums, apricots, apples, cherries and nectarines. Among other fruits grown are the avacado or alligator pear, lemons, limes, pomelos, pomegranates, Japanese persimmons and loquats. Banana and date palms are grown in favored spots for ornamental purposes. Many nurseries exist for the propagation of these plants.

Olives have been grown for half a century and it has been fully demonstrated that the tree has found a natural home here. Climate and soil are particularly adapted to olive culture. The trees bear heavy crops and are free from tree diseases and insect pests. Butte County olives are known the world over. The growth of the industry may be judged by the fact that the value of the olive crop has increased 400 per cent during the past five years.

Approximately thirty thousand acres in Butte County are devoted to deciduous fruit trees. All the standard shipping and canning varieties are grown. Deciduous fruit orchards are found in every part of the county, although the bulk of the fruit, with the exception of the apple yield, is grown on valley and foothill lands. The mountain sections produce winter apples of superior size and quality. The future of the apple industry can hardly be overstated.

Figs are grown in many parts of the county. This is a crop that is now attracting much attention. Since the Calimyrna fig has been introduced, which is a delicious white variety, suited for both fresh and dried sale, fig growing is becoming another important and profitable industry.

The orange is one of Butte's most valuable crops, several thousand acres being planted to this delicious citrus fruit.

Grapes attain early perfection in Butte County. An almost endless variety of table and wine grapes is grown. These grapes are marketed in the eastern part of the United States and in Europe. The first raisins produced in California were dried at a vineyard at Pentz, in this county.

The almond is yet another important crop. In some localties particularly adapted to culture of this nut, growers make large profits.

RICE CULTURE

The growing of cereals is an important industry in Butte. Thousands of acres are planted to grain. During the past few years rice culture has been undertaken on a large scale. Experiments have proved that certain valley soils are excellent for rice production and the crop is now a means of steady and substantial incomes to hundreds of farmers. The United States Government maintains a rice experimental station near Biggs, where several hundred varieties of rice are being grown under different conditions to ascertain what variety of the product and what conditions are best adapted to the soil and climate of the Sacramento Valley.

The United States Government also maintains a large Plant Introduction Garden near Chico, where thousands of varieties of vines and trees are being propagated by government experts for the purpose of improving old and introducing new varieties of fruits, berries, vegetables, cereals, forage plants, etc.

Fine forests of merchantable timber clothe the slopes of the Sierra Nevada Mountains in Butte County at altitudes ranging from 2,000 to 5,000 feet. The principal woods are sugar pine, the finest of soft pines; yellow pine, spruce, fir and cedar. The larger trees grow to a height of 200 feet or more and attain a diameter of from four to ten feet. The great mountain forests of Butte are most valuable possessions and are contributing much to the material prosperity of the county. Properly fostered, they will continue to contribute to prosperity for many generations. The rapidity which characterizes the growth of young trees is assurance of inexhaustible timber wealth in the future.

Among the forest trees is one of great value. This is the Abietine, or orange-flavored pine, which is not known to grow in quantity elsewhere. The Abietine pine contains medicinal properties of great value. At the headwaters of Butte Creek, fifty miles northeast of Oroville at an altitude of 6,000 feet is a large grove of these rare trees.

The gold mines of the county have been famous since early days. The placer mines along the streams yielded big fortunes to the first gold seekers. Today mining is still an important industry and the total gold output exceeds $2,000,000 annually. The mountains are seamed with gold-bearing quartz ledges, and deep mining on scientific methods is followed with success. The gravel along the river beds contains much fine gold and this has given rise to dredge mining, which is now a big industry. One of the richest dredging fields in the State is along the Feather River in the vicinity of Oroville.

Butte County is also the scene of extensive electric power development. The swift mountain streams afford a wealth of energy, the value of which can hardly be estimated. Upon these streams electric power is being developed to light cities and to turn the wheels of industrial plants hundreds of miles away.

Oroville, on the Feather, is the county seat, and Chico, the seat of a State Normal School, the largest city; they are thriving modern cities. There are many fine schools and churches and the county as a whole is one rich in industries and its people progressive and prosperous.

BUTTE COUNTY SUMMARY

Number of Farms Classified by Size

Under 3 acres	2
3 to 9 acres	116
10 to 19 acres	186
20 to 49 acres	321
50 to 99 acres	143
100 to 174 acres	220
175 to 259 acres	127
260 to 499 acres	171
500 to 999 acres	116
1,000 acres and over	98
Total	1,500
Total in 1900	1,179

Land and Farm Areas

Approximate land, acres	1,102,080
Land in farms in 1910	490,777
Land in farms in 1900	677,080
Improved land in farms in 1910	247,097
Improved land in farms in 1900	302,029
Woodland in farms	119,126
Other unimproved land	124,554

Value of All Farm Property

Total value in 1910	$24,086,440
Total value in 1900	15,535,404
Per cent increase 1900-1910	55.0
Land in 1910	19,404,863
Land in 1900	12,460,530
Buildings in 1910	2,281,132
Buildings in 1900	1,434,870
Implements and machinery in 1910	532,320
Implements and machinery in 1900	439,390
Domestic animals, poultry, and bees in 1910	1,868,125
Domestic animals, poultry, and bees in 1900	1,200,614

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	4,713
Other cows	8,359
Yearling heifers	2,605
Calves	3,772
Yearling steers and bulls	2,109
Other steers and bulls	4,660
Total	26,218
Value	$673,968
Horses—	
Mature horses	6,608
Yearling colts	645
Spring colts	402
Total	7,655
Value	$685,441
Asses and burros—	
Number	18
Value	$2,655
Mules—	
Mature mules	1,719
Yearling colts	151
Spring colts	91
Total	1,961
Value	$225,465
Swine—	
Mature hogs	9,317
Spring pigs	5,016
Total	14,333
Value	$83,927
Sheep—	
Rams, ewes, and wethers	29,137
Spring lambs	15,940
Total	45,077
Value	$138,092
Goats—	
Number	3,215
Value	$8,356
Total value all domestic animals	$1,817,904
Poultry and bees—	
Poultry of all kinds	74,982
Value	$45,750
Colonies of bees	1,384
Value	$ 4,471

Principal Crops

Description	Acres	Bushels
Corn	359	14,856
Oats	1,432	54,685
Wheat	20,894	245,743
Barley	17,705	326,447
Kaffir corn and milo maize	409	9,529
Dry edible beans	27	150
Potatoes	171	17,201
Hay and forage—	Acres	Tons
Timothy alone	226	162
Timothy and clover mixed	157	271
Clover alone	81	95
Alfalfa	9,351	38,196
Other tame and cultivated grasses	1,994	2,369
Wild, salt, or prairie grasses	1,253	1,177
Grains cut green	42,726	49,243
All other hay and forage	174	319
Total	55,962	91,832

Poultry products—	
Poultry raised, number	94,183
Eggs produced, dozen	377,598
Value poultry and eggs produced	$158,052
Honey and wax —	
Honey produced, pounds	9,702
Wax produced, pounds	170
Value of honey and wax produced	$924
Wool—	
Wool, fleeces shorn	38,261
Mohair and goat hair, fleeces shorn	1,749
Value wool and mohair produced	$33,991

THE GRAPE AND RAISIN INDUSTRY AN EVER-INCREASING ASSET

BUTTE COUNTY SUMMARY—Concluded.

Special crops—	
Potatoes, acres	171
Sweet potatoes, acres	21
All other vegetables, acres	513
Sugar beets, acres	711
Orchard fruits—	Number Bearing Trees
Apples	34,425
Apricots	9,900
Cherries	4,317
Peaches and nectarines	255,047
Pears	22,159
Prunes and plums	104,474
Total	430,322
Tropical fruits—	Number Bearing Trees
Figs	9,518
Lemons	2,223
Oranges	147,412
Pomelos	122
Olives	73,453
Total	232,728
Grapevines—	
Number in bearing	258,742

Small fruits—	
Strawberries, acres	48
Blackberries and dewberries, acres	57
All others, acres	43
Total	148
Nuts—	Number Bearing Trees
Almonds	84,069
Pecans	158
Walnuts	1,063
Total	85,290

Irrigation

Number of farms irrigated in 1909	556
Acres irrigated in 1909	28,754
Acreage enterprises were capable of irrigating in 1910	115,075
Acreage included in projects	233,500
Main ditches, number	135
Length, miles	270
Laterals, number	145
Length, miles	170
Flowing wells, number	....
Pumped wells, number	46
Cost of irrigation enterprises up to July 1, 1910	$1,231,894
Average cost per acre irrigation enterprises were capable of irrigating in 1910	10.71
Mineral production in 1913	$2,533,940

SUTTER COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	608 sq. miles	Population	5,469	5,886	6,328
County seat, Yuba City (town)		Population	....	....	1,160
Population per square mile, 10.4					
				Highest	Lowest
Elevation	57 feet	Temperature (1914)		...	...
Rainfall	....	Snow			....

Sutter County lies in the center of the Sacramento Valley on the east bank of the Sacramento River. It is strictly a fruit growing, dairying and general farming community. It is named after General John A. Sutter, the sturdy pioneer, who settled in the Sacramento Valley in 1837. It is one of the smallest but one of the most fertile counties in California. It is an alluvial plain, 40 miles long and approximately 30 miles wide, between the Sacramento and Feather rivers.

The area of the county is 608 square miles. It is all valley land with the exception of a curious formation of rocks and earth that rises from the center of the county to an elevation of about 2,000 feet. These isolated peaks are known as the Sutter Buttes. They cover a base area of 14,000 acres and can be seen from all parts of the Sacramento Valley. The slopes form excellent pasture lands during the spring months.

SOIL AND CLIMATIC CONDITIONS

The soil is alluvial sandy loam. It is deep and productive of all forms of plant life. The winters are mild and the summers pleasant and dry. The rainfall averages from 20 to 30 inches and well water for irrigation may be struck at a depth of from fifteen to twenty-five feet at any place in the county. These conditions are, of course, ideal for husbandry in all its branches, and hence there are a large number of very prosperous farms in Sutter.

GREAT FRUIT CENTER

Along the Feather River for a distance of about thirty miles and extending for several miles back is one of the greatest deciduous fruit belts in the West. Peaches of all varieties reach perfection here. Sutter cling peaches bring the highest prices at the canneries. The fruit is of excellent color, size and flavor.

Sutter is famous as the home of the Thompson Seedless grape. This grape is sweet and delicious when eaten fresh, and when sundried and cured it makes a dainty raisin, which is highly valued as a confection. It grows in huge clusters and produces heavily. The largest vineyard in the world devoted exclusively to Thompson Seedless grapes is in Sutter County.

THOMPSON SEEDLESS GRAPES

The Thompson Seedless grape, from which the famous raisin is made, has its origin in Sutter County, which lies just across the river from the colony lands. In 1872 three grape vine cuttings were received from New York by Mr. Wm. Thompson and were grafted to Los Angeles grape vines. Only one of them grew, and four years later, in the fall of 1876, the vine bore 500 pounds of grapes, which were exhibited at the District Fair, and received first premium. The Horticultural Society gave the grape the name of "Thompson Seedless," after Mr. Thompson. There has been many disputes regarding it, but Mr. Thompson claims the right to the official name.

Growing the Thompson Seedless has become one of our leading industries and is increasing rapidly from year to year. In spite of the large acreage the demand for the raisin far exceeds the production. We have practically the world for a market with California the source of supply.

So-called second-class land makes the finest kind of grape land and vineyardists in this section do not know what failure is. The vines usually come into bearing in three years and will produce one and one-half tons of grapes to the acre at this age, and at four years the tonnage is from five to seven tons per acre.

The average price for the green goods ranges from $15 to $22 per ton, while the dried product brings different prices, according to the manner in which it has been prepared. There are several processes used in drying; the bleached raisin brings the highest price and is of a clear amber color. Then comes the soda dipped, oil-bleached, and the natural or sun-dried. The soda-dipped and the oil-bleached goods are almost black, while the sun-dried is of the natural dried color.

To the man caring only for a small ranch, the grape offers rich opportunities. He can handle a small acreage alone and can meet his small expenses while waiting for the vines to mature by planting the space between the rows to either vegetables or berries.

The prune is also a paying fruit in Sutter. The tree is longer lived than the peach and conditions here for drying the crop are all that could be desired. Rains seldom fall until after the crop has long been harvested and ready for the market. The Bartlett pear is also produced in quantities along the river lands of Sutter. The alluvial soil and climatic conditions favor pear production. The tree matures at six years and bears heavily for several generations.

Figs are grown on many farms and apricots are also a paying crop. There are over 5,000 bearing apricot trees in the county. Olives, oranges and lemons all do well.

ALMOND GROWING

Sutter is one of the leading counties in California in almond production, certain localities being exceedingly favorable to the crop. In 1910 there were 61,572 bearing trees in the county and since that date the acreage has steadily increased. The slopes of the Sutter Buttes, where there is excellent air drainage, making the orchards practically immune from frosts, produce heavy crops of almonds annually. Walnuts are also grown and there is excellent opportunity for the extension of this industry.

DAIRYING

Sutter is a county of general farming. In addition to fruits, it produces grain, hay and alfalfa. Dairying and stock raising are also followed. Indian and Egyptian corn are grown and fed to hogs. There are a number of

Photo by McCurry Foto Co.

ONE OF THE BEAUTIFUL PALM-SHADED STREETS FOR WHICH
YUBA CITY, SUTTER COUNTY, IS NOTED

private dairies with over one hundred cows each. On the river lands alfalfa produces ten and twelve tons to the acre annually and keeps the meadows green both winter and summer.

The river lands of Sutter are wonderfully fertile, and great acreages are planted to beans, sugar beets and kindred crops.

Rice is also grown in this county, there being a large expanse of land suited to the crop.

Quite an area along the Sacramento River is marsh land. This is now being reclaimed by the construction of immense levees to protect the lands from the river waters. Great drainage systems are being installed to care for the seepage and surface water. The river reclaimed land produces heavily without irrigation.

For several years Sutter County has felt the stimulating effect of the increase in rural population. New families have been arriving and settling upon the farm lands. Grain fields are giving way to orchards, vineyards and other forms of intensive cultivation.

Sutter County has winter and summer grazing land for stock. Upwards of 100,000 sheep are run into the county every year to be fattened for market.

IRRIGATION FACILITIES

In the northern part of the county thousands of acres are irrigated by the Sutter-Butte Canal, which takes its water from the Feather River. In sections not served by the canal, pump irrigation from wells is followed successfully and economically.

TRANSPORTATION

Transportation facilities are good. The Sacramento River is an outlet for the products on the western border of the county. Two lines of the Southern Pacific Railroad pass through the county and the Northern Electric road crosses the county in two directions.

The total assessed valuation of Sutter is $13,270,000. The county is entirely free from debt and enjoys an economical government.

CITIES AND TOWNS

Being primarily a farming county, Sutter has no large cities. Yuba City, the county seat, situated on the west bank of the Feather River, opposite Marysville, the county seat of Yuba County, is a beautiful little city of homes. The character of the residences testify to the prosperity of the community. The city owns its own water system, is lighted by electricity and has good business houses.

Meridian, on the Sacramento River, is in the center of a wonderfully rich farming section. It is connected with Yuba City by an electric railway. Live Oak is a rapidly growing town in northern Sutter.

Nicolaus, Vernon, Tudor, Sunset City, Oswald, Marcuse and Chandler, are all centers of producing sections.

Sutter invites thorough investigation by new settlers in the Sacramento Valley. Its advantages are many. It has an excellent system of schools and all the towns have churches of various denominations. No liquor is sold in the county.

Land can be purchased in Sutter at prices ranging from $100 to $300 an acre. The price variation is determined by location, quality of soil and transportation facilities.

SUTTER COUNTY SUMMARY

Number of Farms Classified by Size

3 to 9 acres	57
10 to 19 acres	101
20 to 49 acres	142
50 to 99 acres	91
100 to 174 acres	123
175 to 259 acres	84
260 to 499 acres	123
500 to 999 acres	78
1,000 acres and over	74
Total	873
Total in 1900	728

Land and Farm Areas

Approximate land, acres	389,120
Land in farms in 1910	385,462
Land in farms in 1900	293,287
Improved land in farms in 1910	199,510
Improved land in farms in 1900	206,877
Woodland in farms	13,956
Other unimproved land	171,996

Value of All Farm Property

Total value in 1910	$19,115,593
Total value in 1900	9,182,731
Per cent increase 1900-1910	108.2
Land in 1910	14,869,242
Land in 1900	6,976,320
Buildings in 1910	2,032,535
Buildings in 1900	987,700
Implements and machinery in 1910	458,269
Implements and machinery in 1900	313,780
Domestic animals, poultry, and bees in 1910	1,755,547
Domestic animals, poultry, and bees in 1900	904,931

Domestic Animals on Farms and Ranges

Cattle*—	
Dairy cows	6,728
Other cows	3,254
Yearling heifers	1,939
Calves	2,623
Yearling steers and bulls	1,012
Other steers and bulls	823
Total	16,379
Value	*$465,202
Horses—	
Mature horses	4,869
Yearling colts	587
Spring colts	228
Total	5,684
Value	$573,051
Mules—	
Mature mules	1,922
Yearling colts	107
Spring colts	67
Total	2,096
Value	$272,402
Asses and burros—	
Number	20
Value	$6,670
Swine—	
Mature hogs	9,121
Spring pigs	6,008
Total	15,129
Value	$105,752

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*Includes animals, age or sex not specified.

SUTTER COUNTY SUMMARY—Concluded.

Sheep—	
Rams, ewes, and wethers	51,135
Spring lambs	38,530
Total	89,665
Value	$284,023
Goats—	
Number	511
Value	$2,031
Total value all domestic animals	$1,709,131
Poultry and bees—	
Poultry of all kinds	68,861
Value	$38,690
Colonies of bees	2,055
Value	$7,726

Principal Crops

Description	Acres	Bushels
Corn	761	22,373
Oats	3,568	56,823
Wheat	14,537	176,750
Barley	27,457	491,720
Kaffir corn and milo maize	352	7,750
Dry edible beans	2,766	76,201
Potatoes	218	28,419

Hay and forage—	Acres	Tons
Timothy and clover mixed	80	80
Clover alone	415	2,525
Alfalfa	7,388	21,791
Other tame and cultivated grasses	703	1,003
Wild, salt or prairie grasses	7,466	9,020
Grains cut green	14,744	20,612
All other hay and forage	1,948	1,986
Totals	32,744	57,017

Poultry products—	
Poultry raised, number	101,908
Eggs produced, dozen	420,198
Value of poultry and eggs produced	$167,240
Honey and wax—	
Honey produced, pounds	76,812
Wax produced, pounds	745
Value of honey and wax produced	$4,909
Wool—	
Wool, fleeces shorn	149,821
Mohair and goat hair, fleeces shorn	800
Value wool and mohair produced	$110,738
Special Crops—	
Potatoes, acres	218
Sweet potatoes, acres	41
All other vegetables, acres	303
Sugar beets, acres	27

Orchard fruits—	Number Bearing Trees
Apples	5,433
Apricots	5,086
Cherries	1,249
Peaches and nectarines	149,057
Pears	17,911
Prunes and plums	65,723
Total	244,459

Tropical fruits—	Number Bearing Trees
Figs	4,675
Lemons	602
Oranges	2,427
Pomelos	18
Olives	3,018
Total	10,740

Grapevines—	
Number in bearing	1,249,923
Small fruits—	
Strawberries, acres	1
Blackberries and dewberries, acres	7
All others, acres	8
Total	16

Nuts—	Number Bearing Trees
Almonds	61,572
Pecans	11
Walnuts	671
Total	62,254

Irrigation

Number of farms irrigated in 1909	39
Acres irrigated in 1909	1,173
Acreage enterprises were capable of irrigating in 1910	1,361
Acreage included in projects	1,959
Main ditches, number	13
Length, miles	6
Pumped wells, number	18
Cost of irrigation enterprises up to July 1, 1910	$18,800
Average cost per acre irrigation enterprises were capable of irrigating in 1910	$13.81

Mineral Production

Sutter shares with Yolo County the distinction of being the only section of the State which had no commercial output of some kind of mineral substance during 1913. Both clay and coal exist here, but deposits of neither mineral have been placed on a productive basis.

YUBA COUNTY

Date of creation, February 18, 1850.

			1890	1900	1910
Land area	639 sq. miles	Population	9,636	8,620	10,042
County seat, Marysville (city)		Population	3,991	3,497	5,430

Population per square mile, 15.7

			Highest	Lowest
Elevation	67 feet	Temperature (1914)	105	28
Rainfall	20.64 inches	Snow		

Yuba County, while one of the smallest in the Sacramento Valley, is one of the richest in resources in all California. In the early days Yuba was famous as a gold producer. Today, while still a heavy contributor to the State's output of precious metal, principal importance attaches to its agricultural production and it is far more famous for some of its farm products. For instance, the largest hop fields in the world are located at Wheatland in this county and the quality of hops grown compares favorably with those of the best hop yards of Europe.

HOMESEEKER'S OPPORTUNITY

This county offers exceptional advantages to the homeseeker and settler. The soil and climatic conditions are favorable to the production of practically every crop known to temperate and semi-tropic climates. The crops principally grown are wheat, barley, oats, hops, beans, alfalfa, garden truck, fruits, grapes and nuts. Some Indian corn is grown on the low moist lands near the rivers or by irrigation; also Egyptian corn and other grain bearing sorghums.

ORCHARD CROPS

The orchard crops principally grown are pears, peaches, plums, prunes, apples, olives and grapes. Among other orchard crops grown here are oranges, lemons, grape fruit, cherries, apricots, nectarines, figs, almonds and walnuts. Apples do especially well in the higher foothill and mountain areas and will no doubt become an important product when this region has the advantage of railroad transportation.

The subdivision of large tracts of land has been going on steadily for several years and this has brought new settlers into the county, as a result new farms are being developed and new crops introduced.

DAIRYING

During the last few years there has been a large planting of alfalfa which thrives luxuriantly, producing when irrigated five or six crops a year, and providing the basis for a rapidly growing dairy industry which promises to become one of the most important in the county, as it is one of the most profitable.

D STREET, A PROMINENT BUSINESS THOROUGHFARE IN MARYSVILLE, YUBA COUNTY, IN HOLIDAY ATTIRE

IRRIGATION

A considerable area is under irrigation and this is constantly being increased. The principal irrigation canals are the Browns Valley and Hallwood systems, which together irrigate several thousand acres. Along the Feather River extensive areas are irrigated by pumping, and some valley land is irrigated from wells, an abundant supply of water being secured near the surface at a comparatively small cost.

Cheap electric power is available for pumping and for other farm uses. Many Yuba County farms have motors installed for driving pumps and other farm implements, with electric lights in house and barn. The first successful long distance electric power transmission line was built to convey to San Francisco power generated in this county. This plant, at Colgate-on-the-Yuba, now has a capacity of 20,000 horsepower and is one of a great chain of power generating stations which utilizes the waters of this and other streams in this and adjoining counties.

MINERAL RESOURCES

The mineral resources of Yuba are great. The methods of mining now followed include placer, quartz and dredge. In the upper foothills and mountain sections, quartz mining is successfully followed and rich strikes have been made in recent years which have had a tendency to stimulate this important industry. Dredge mining is followed successfully along the bed of the Yuba River, where there are great deposits of gold-bearing gravel. The annual gold output of Yuba County is between $2,000,000 and $3,000,000.

In a county where most of the boundary lines are never-failing streams, it is but natural to expect that there is plenty of water for all purposes. This is the conditions in Yuba County. The Feather and the Yuba rivers are both important streams.

TRANSPORTATION

Transportation facilities are excellent; the main California-Oregon line of the Southern Pacific Railway Company passes through this county, the Western Pacific Railway, a new transcontinental line, and the Northern Electric Railway, which is a part of an extensive interurban system centering at Sacramento and San

Francisco. During certain seasons of the year the Feather River, which is the county's western border, is open to navigation as far as Marysville.

Yuba offers enjoyable recreation to the sportsman. The county's streams and forests afford the best of fishing and hunting during the proper season. Quail and dove are numerous in the valley and foothill sections, while in the higher altitudes deer are plentiful, and occasionally a bear falls before the gun of the skilled huntsman. Ducks and geese are abundant along the rivers and lakes.

LEADING CITIES AND TOWNS

Marysville, the county seat and railway center of Yuba County, is a prosperous and progressive city of 7,000 population. Since the early days Marysville has been an important commercial city. Some idea of its importance may be gathered from the fact that there are located at Marysville three large banks, the combined resources of which on January 1, 1914, were $5,300,000; total deposits, $4,200,000; total capital and surplus, $870,000. Because of its importance as a trading center and one lines of communication extending in many directions, Marysville has been called the "Hub City."

The second city of the county is Wheatland, known far and wide as the center of the principal hop district of California and the scene of the largest single hop field in the world. There is a bank with resources of $80,000.

Twelve miles northeast of Marysville is Browns Valley, a farming section comprising 45,000 acres of land. Much of this land is irrigated by a gravity system. In the same district there are a number of rich quartz mines that are now being worked.

Smartsville is east of Browns Valley and eighteen miles from Marysville. It is an historic mining camp and was a lively place in early days. Mining is still followed in the vicinity and the district is also noted for its production of both citrus and deciduous fruits.

Hammonton is the newest town in the county and is the scene of the principal dredge mining operations on the Yuba River.

YUBA COUNTY SUMMARY

Number of Farms Classified by Size

3 to 9 acres	13
10 to 19 acres	20
20 to 49 acres	33
50 to 99 acres	34
100 to 174 acres	82
175 to 259 acres	30
260 to 499 acres	93
500 to 999 acres	64
1,000 acres and over	67
Total	436
Total in 1900	483

Land and Farm Areas

Approximate land, acres	408,960
Land in farms in 1910	249,108
Land in farms in 1900	312,321
Improved land in farms in 1910	94,250
Improved land in farms in 1900	154,013
Woodland in farms	70,175
Other unimproved land	84,683

Value of All Farm Property

Total value in 1910	$6,666,211
Total value in 1900	4,703,613
Per cent increase 1900-1910	41.7
Land in 1910	4,911,611
Land in 1900	3,375,150
Buildings in 1910	688,565
Buildings in 1900	637,130
Implements and machinery in 1910	171,735
Implements and machinery in 1900	151,650
Domestic animals, poultry and bees in 1910	894,300
Domestic animals, poultry and bees in 1900	539,683

Domestic Animals on Farms and Ranges

Cattle—	
Dairy cows	2,255
Other cows	4,773
Yearling heifers	1,628
Calves	1,827
Yearling steers and bulls	1,152
Other steers and bulls	1,959
Total	13,594
Value	$276,046
Horses—	
Mature horses	2,803
Yearling colts	288
Spring colts	153
Total	3,244
Value	$278,764
Mules—	
Mature mules	726
Yearling colts	48
Spring colts	26
Total	800
Value	$78,900
Asses and burros—	
Number	31
Value	$3,515
Swine —	
Mature hogs	3,288
Spring pigs	2,251
Total	5,539
Value	$32,101
Sheep—	
Rams, ewes and wethers	40,344
Spring lambs	27,318
Total	67,662
Value	$204,939
Goats—	
Number	502
Value	$964
Total value all domestic animals	$875,229
Poultry and bees—	
Poultry of all kinds	27,936
Value	$18,661
Colonies of bees	149
Value	$410

Principal Crops

Description	Acres	Bushels
Corn	360	5,645
Oats	1,740	31,834
Wheat	10,376	74,227
Barley	2,801	36,806
Dry edible beans	59	1,112
Potatoes	124	7,698
Hay and forage—	Acres	Tons
Timothy alone	30	40
Timothy and clover mixed	73	160
Clover alone	176	345
Alfalfa	1,798	4,335
Other tame and cultivated grasses	283	698
Wild, salt or prairie grasses	3,097	2,421
Grains cut green	11,456	10,128
All other hay and forage	97	61
Total	17,010	18,188

YUBA COUNTY SUMMARY—Concluded.

Poultry products—	
Poultry raised, number	44,202
Eggs produced, dozen	11,892
Value of poultry and eggs produced	$66,938
Honey and wax—	
Honey produced, pounds	545
Wax produced, pounds	10
Value of honey and wax produced	$83
Wool—	
Wool, fleeces shorn	63,383
Mohair and goat hair, fleeces shorn	208
Value wool and mohair produced	$45,777
Special crops—	
Potatoes, acres	124
Sweet potatoes, acres	6
All other vegetables, acres	235

Orchard fruits—	Number Bearing Trees
Apples	5,468
Apricots	1,481
Cherries	559
Peaches and nectarines	8,744
Pears	10,220
Prunes and plums	3,487
Total	29,959

Tropical fruits—	Number Bearing Trees
Figs	3,159
Lemons	109
Oranges	1,263
Olives	6,670
Total	11,201
Grapevines—	
Number in bearing	162,751

Small fruits—	
Strawberries, acres	4
Blackberries and dewberries, acres	6
All others, acres	9
Total	19

Nuts—	Number Bearing Trees
Almonds	3,163
Pecans	6
Walnuts	287
Total	3,456

Irrigation

Number of farms irrigated in 1909	112
Acres irrigated in 1909	3,073
Acreage enterprises were capable of irrigating in 1910	6,401
Acreage included in projects	46,322
Main ditches, number	36
Length, miles	128
Laterals, number	13
Length, miles	87
Pumped wells, number	11
Cost of irrigation enterprises up to July 1, 1910	$198,268
Average cost per acre irrigation enterprises were capable of irrigating in 1910	30.97

Mineral Production in 1913

Substance	Value
Gold	$2,491,505
Silver	7,571
Stone industry	8,063
Total	$2,507,139

MAP OF

YUBA & SUTTER COUNTIES

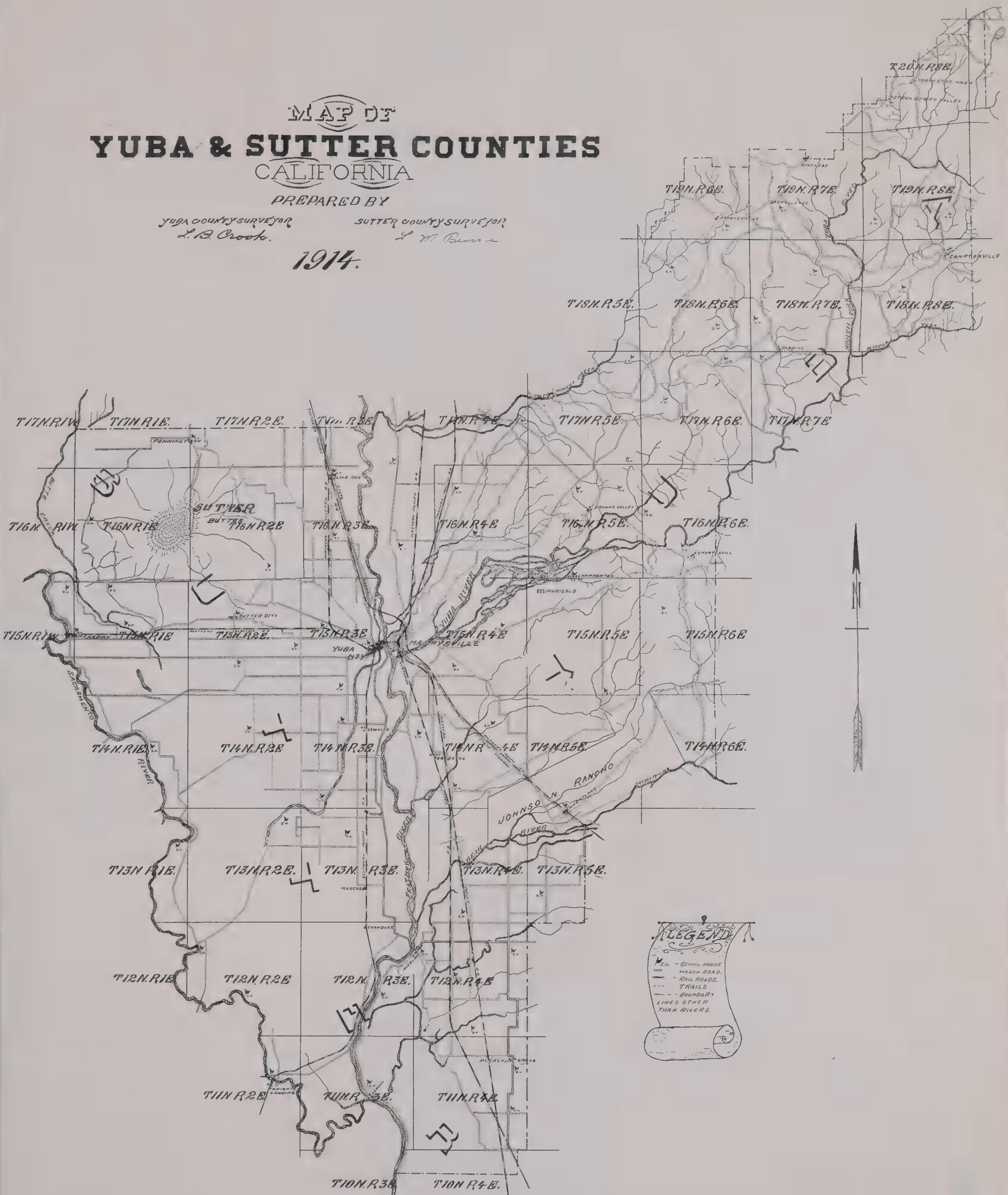
CALIFORNIA

PREPARED BY

YUBA COUNTY SURVEYOR
L. B. Crook.

SUTTER COUNTY SURVEYOR
L. W. Burns.

1914.



RT. REV. K. BJÖRGO

RT. REV. O. P. VANGSNES

Advisory

Committee

Scandinavian-

American

Colonies

RT. REV. L. C. FOSS

REV. E. M. STENSRUD

The Scandinavian-American Colonies

Unit Number One

SINCE reading the foregoing pages, the reader must readily see that our beloved church and the institutions we love so dearly have plenty of room for growth in this great expanse of the West, where God has, in His wisdom, seen fit to give His people an almost ideal condition for their advancement and happiness. If this great State can be populated with a good, wide-awake, God-fearing and Christian people, our children, and our children's children can here build their homes where for generations to come, surrounded by kindred spirits and institutions, they can become a power in the land.

My object in writing thus fully of California is for the purpose of calling to the attention of our people the great field that lies here at our very doors awaiting them, and giving to each one the benefit of the years I have labored in the vineyard of the Lord, in the land by the Golden Gate. I have been urged by a great number of influential men and leaders in our church body to do this work, and I shall do all in my power to extend the influence and power of the Lutheran Church in this favored section of this great nation of ours.

Many leading men of our synod—of clergy and laity—have co-operated with me in every way possible and I shall never feel satisfied until several strong centers of Lutheran influences and homes shall have been established in the great valleys of the Golden West. Some may even go so far as to criticize our motives; of this we care nothing, since we ourselves know that our efforts are solely for the advancement of our beloved church and its interests. Our people must not be allowed to be brought here and exploited for the furtherance of the interests of any man or set of men. Realizing this, an organization of our own people has been formed to protect the interests of those desiring to avail themselves of the opportunity. Careful selections of the most favorable sections have been made—and shall be made—where the soil is of the best, and conditions are most conducive to personal happiness and success. There are already many of our faith located here in the State, but in such scattered sections that their influence amounts to little as far as the church itself is concerned. How much better it would be if they were all settled in colonies where they could enjoy their church associations, establish their own churches and schools and thus become a power for good.

Organized as we are and prompted by a desire to advance the interest of the church first, last and all the time, we can secure control of large tracts in the most favorable sections which can be handled at a low cost and on the easiest of terms, giving to the church and its interests a large share in the profits that would otherwise go to the aggrandisement of some individual or set of individuals, having no other interest than the accumulation of wealth. The men associated in this great movement are men of unquestionable integrity, fully informed as to values and conditions, well known to the leaders of our church organization and ready to do everything they can to advance the interests of that which we all hold most dear. What we have accomplished in San Francisco, Oakland, Los Angeles, Fresno, Eureka and other places we hope to do on a grander scale in the State itself.

The first unit, or Unit No. 1, to be established under the plan outlined in the foregoing pages is located in Yuba County. It consists of a nucleus of some eighteen hundred acres in District No. 10 and about six miles north of Marysville along the east side of the Feather River and on the main traveled highway or automobile driveway.

The Western Pacific transcontinental railroad line goes along the eastern border of the land, with a siding station for fifty cars adjoining the property.

The Southern Pacific transcontinental railroad line also has a siding station about one mile east.

The Northern Electric railroad line running from Sacramento, through Marysville to Chico, runs along the west side of the Feather River, in Sutter County, and about one and one-half miles distant from the lands, thus insuring three distinct railroad outlets in addition to the six-mile highway into Marysville.

This colony is to be known as Unit No. 1 of the "Scandinavian Colonies."

In order to more successfully handle the lands that may from time to time be selected in the interest of our people and to protect them from the unscrupulous land promoter and wild-cat schemer, our people decided to form a corporation. As a result the organization has been perfected of "The Scandinavian-American Colonies of California." Large tracts will be secured by the corporation, divided up into smaller units and sold at a very small margin of profit and at a good deal less than the individual could purchase the same quality of land himself. In addition to the great initial saving in the cost of the land to the colonist, he will know that the soil and local conditions are right, the title to the property of the very best, the ultimate object of the plan is not only to render him and his family every assistance to the establishment of a home, but to render a great service to the cause we all hold most dear.

Without incorporation, no one can be held responsible, while on the other hand, incorporated as the plan is, every act is made responsible to you and to the Advisory Committee.

SOILS

Prof. Geo. W. Shaw, one of the best known soil and land experts on the Pacific Coast, and for many years connected with the Agricultural Department of the University of California, was called into consultation and filed with the officers of the "Scandinavian-American Colonies of California" the following letter relative to lands of Unit No. 1:

San Francisco, Cal., Dec. 2, 1914.

Scandinavian-American Colonies of California,
San Francisco, California.

Dear Sirs:

Referring to your inquiry relative to the lands of the Scandinavian-American Colonies in District No. 10, I beg to say that I have made a thorough examination of these lands and have been familiar with them for the past four years. The lands are located about five miles north of the city of Marysville, Yuba County, California, 149 miles north of San Francisco, and 60 miles north of Sacramento, the capital of the State. The city of Marysville is a prosperous inland city of 6,500 population.

The transportation facilities are excellent both for freight and passenger traffic, the service being by the main lines of both the Southern Pacific and the Western Pacific railroads, and for local traffic the excellent service of the Northern Electric railroad.

The land lies immediately along the Feather River and in the main consists of two general classes, *viz.*, strictly Feather River bottom silt of extreme fertility and thoroughly sub-irrigated, and plains land of an alluvial formation and silt loam texture. This body of land has long been known as one of the best ranches in the region and State. The soil is entirely free from hardpan of any character and also from alkali. The soil is a rich silt loam, well supplied with all the essentials of plant food, retentive of moisture, easily cultivated, and lends itself well to the production of a wide range of cultures. The plains land is of the same character as that which has been very highly developed to fruit and intensive crops on the opposite side of the river, and is capable of as high development, although at the present time it is held at a much lower figure.

The climatic conditions for crop productions are exceedingly favorable in this locality.

Even without irrigation, table and raisin grapes, almonds, olives, and deciduous fruits can be successfully grown on this land, and much alfalfa is also grown in the locality without irrigation. For the latter crop, however, irrigation is desirable, as both the number of cuttings per season and the yields will be increased thereby.

Water is available for irrigation from shallow wells by pumps, the lift being about 25 feet. With such development the productive capacity of the land would be practically doubled. Under irrigation it is entirely practicable to secure two crops of field and garden cultures per season, and under the most intensive methods by competent men even three crops may be secured per year in garden truck.

Under irrigation the land has adaptability to the following crops:

Fruit—Prunes, plums, apricots, figs, olives, pears for commercial plantings; cherries, oranges and apples for home use.

Nuts—Almonds and walnuts for commercial use.

Grapes—Table and raisin grapes, particularly the Thompson Seedless variety.

Field Crops—Small grains, alfalfa, sorghum, milo maize, corn, rape, beans.

Garden Crops—Tomatoes, peppers, melons, egg plant, and in fact practically all vegetables, provided intelligent care and attention is given.

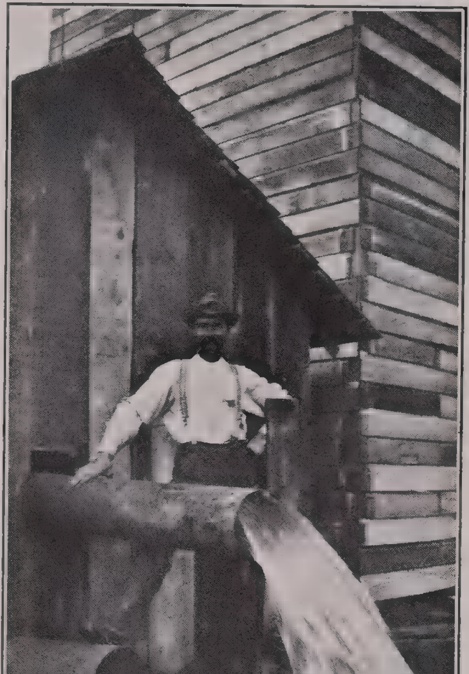
Berries—Blackberries, loganberries, strawberries.

The bottom lands are admirably adapted to the production of corn, potatoes, beans, cowpeas, and some portion for peanuts and sweet potatoes.

For an all-round property it would be difficult to find one better situated and better adapted to production of a wide character.

I can thoroughly commend it to a purchaser.

Yours very truly,
(Signed) G. W. Shaw,
Consulting Agriculturist and Land Expert.



JOHN HANSEN

In securing a location in this district our good friends will not be among strangers and surrounded by influences detrimental to their peace of mind and moral welfare, for there is already established a considerable colony of the Hansen family here.

Mr. Hansen was born at Ravstad, Schleswig, and educated in the German state schools. When but sixteen years of age in 1893 he emigrated to America, reaching California on Christmas eve of that year. Immediately upon his arrival he secured employment on a farm at Ferndale, Humboldt County, California, where he continued his work as a farmer until 1913. After a trip to the Old Country he settled near Marysville, adjoining our first Scandinavian Colony. He owns a considerable tract of land here and is engaged in the dairying industry principally. He reports that he has been very successful. He is thoroughly satisfied with conditions, and says "the climate here is ideal; the soil is very fertile and the water supply is plentiful the year round."

During a recent visit to Mr. Hansen's home, the writer was taken over his entire holdings and while there secured a photograph of Mr. Hansen standing near the well and pumping plant that furnishes the water for his fields. Mr. Hansen, when questioned concerning the pump, water supply and cost of same, said: "This pump has been running four and five days at a time, but never lowers the water below a certain point. You can never move it from that point, though the pump were allowed to run a year."

The pump is run by electricity and the whole plant, including the sinking of the well, the pump, the electric motor, together with the pump house, cost less than $900.

Electric power is plentiful and the cost very low, as one of the great power lines to the cities of Marysville, Sacramento and San Francisco itself runs through this district.

Mr. Hansen's well supplies an abundance of water for eighty acres.

The occasion of the writer's visit to Marysville was the christening of Mr. Hansen's little boy, Mederd Henry. Mrs. Hansen was the former Miss Regina Christina Christensen. Many healthy children have been born to Mr. and Mrs. Hansen. They live in a very comfortable home, beautifully located, on their ranch. There is, however, a whole colony of the Hansen family in the same district. There is Mrs. Alma Hansen, on a considerable tract adjoining John Hansen's farm. Mrs. Hansen is the widow of the late Henry Hansen, who met with a sad accident and died not many months ago. Not far from them are located Mr. Hans Thompsen, their brother-in-law, and Christ and Hans and Nils Christensen, most of whom were present on the occasion of the christening. All were pleased to think that they had bought land and settled in that part of the State. But one thing they were missing—the services of their church.

The Hansen farms are contiguous to the lands operated by the Scandinavian-American Colonies. And an interesting fact in this connection may be related that Mr. Walter Forde, son of Rev. N. Forde, Starbuck, Minnesota, was industriously engaged in the erection of a home for himself and family on the forty-acre tract just bought by him from the Scandinavian-American Colonies. Mr. Forde was also present at the christening in the Hansen home.

Within a relatively short time, judging from the interest already manifested in the work, a large and successful colony of our people will be permanently established here. That will be the beginning of the realization of our dream to see the fertile valleys of California covered with Lutheran homes, schools and churches.

A Word by Rev. G. T. Lee

Editor of Lutheran Herald, Official Organ of the Synod.

[Excerpt from editorial written under date of July 8, 1915.]

A PERSON from the Northwest visiting the Pacific Coast enters a new country. The climate, soil, vegetation, the cities, and everything seems to be entirely different. The mountains, the palm trees, the cypress, the eucalyptus, the live oak, and the abundance of roses and other flowers, the well-kept orchards of olives, oranges, lemons, and cherry trees looks to the man from the East like a beautiful fairyland, and when he returns home and thinks it all over, it is like a beautiful dream. He is also impressed by the "spirit of the West." All seem to be enthusiastic, and in describing the advantages of the country they use very strong language. We heard one speaker who, after having made very extravagant claims, said: "You may think I am exaggerating, but it is impossible to exaggerate when you speak about this country." * * *

What the district needs is more settlers, especially in the country, Norwegian settlements where Norwegian churches can be organized as in the Northwest. The Norwegian population in the cities is as yet to a great extent a floating population, and the settlers in the country are scattered, so as to make the organization of congregations almost impossible. Efforts have been made by Rev. Henriksen, Rev. Foss and Rev. Stensrud to encourage larger settlements. We believe this is a wise movement. But there is, of course, more or less, especially more, jealousy among the different states and localities, and as soon as a person begins to advocate a settlement in a certain locality, he will immediately be suspected of being a land speculator and land agent. We believe that the above mentioned pastors are all intensely interested in the work of the church and see that this plan of settled communities is the only way in which the church can be built up. They are entirely justified in trying to direct our people who come out West to settle together and thus make the organization of churches possible. We spent two days in Sacramento Valley, where an effort is being made to gather a Norwegian settlement. The general appearance of the country looked good to us. We have very little knowledge of soil and the difficulties of fruit raising, but we do believe, if some of our Norwegian farmers settled here, they would make good.

A Word to the Prospective Settler

By G. M. Sterud*

SINCE 1892 I have drifted from place to place. Then I left my farm-home in South Dakota. My field of operation has embraced twenty-five of the Western States, in eleven of which I have lived with my family. I have worked in the country as well as in the cities. Without boasting, therefore, I can say that I have acquired a fair knowledge of the opportunities offered the settlers in these states.

G. M. STERUD

Three years ago, when Rev. E. M. Stensrud asked me to join a movement to help in directing our people seeking new homes and more particularly to assist in encouraging them to form settlements where they may enjoy the blessings of church and school, I immediately approved of his plan and decided to take a hold. I was, however, not ignorant of the great responsibility such work would carry with it. Once during my extensive travels through this State, I was waiting at the station for a train. It was late at night. There chanced to be a lot of immigrants in the waiting-rooms—mothers tired from their long journey, children restless, and the fathers downcast and in low spirits. Thought I, "Evidently they are planning for the future." The idea ran through my mind, "Suppose I had induced these people to leave their homes, and I should not be able to locate them where they could make good." There and then I resolved never to encourage anyone to sell his home and seek new quarters. And let me add: You who are located where you have access to church and school, and are surrounded by good and peaceful neighbors, think twice before you sell. It matters not in what part of the country you are. You may have been a factor in building up your community. Your moving away may have the effect of removing a strong pillar from a building that would suffer greatly by it. Never take out a pillar before you can replace it with one even stronger than the one you take out. It is not breaking up of settled communities we encourage but rather to build up new communities out of the material constantly floating westward on the tide of immigration from Eastern states. If my knowledge of conditions in California can be of benefit to anyone, I shall be glad to furnish it. I am in position to do so. My vocation does not take all of my time, and I have studied conditions here, basing my investigation on statistics of the highest authority—from Federal and State agricultural departments.

Every country has its good as well as its bad points, and so California. As a whole it is, no doubt, the most wonderful State in the Union, but all its land is not good land. The knowledge of soil in the Middle West helps a man very little in this State. In this connection it is well to mention that the United States Government has gone to great expense in surveying the arable land of California so as to find out what the different kinds of soil are good for. This information is not furnished by the average real estate man, as it may not favor his particular tract. We shall stand ready at all times to furnish all information thus prepared by the State and Federal departments of agriculture. And the land we now recommend and shall come to recommend is and will be only of the kind verified by the findings of State and Federal land experts. We have only one aim, the welfare of the settler. For that purpose we organized the Scandinavian-American Colonies of California.

MARYSVILLE

The first section selected is a tract located along the Feather River in Yuba County, just five miles from the city of Marysville, with a population of 6,500 people, and located at the junction of the Yuba and Feather rivers. It is the county seat of Yuba County and one of the oldest cities in the state of California, having been founded in 1849. It was the direct outgrowth of the gold mining boom in Northern California, and owing to its central location and facilities for water transportation, it immediately became the distributing point for a vast territory, from which, within a short time, over thirty-six stage lines radiated to all parts of the mining districts. At present most of these stage lines have given way before the encroachments of the modern railroad systems. Marysville is now served by the main lines of the Southern Pacific, Western Pacific and Northern Electric railroads, with branch lines extending from this point to Oroville, Chico, Woodland and Colusa.

The possession of terminal freight rates for Marysville shippers has enabled our wholesalers to build up a vast trade in Northern California, extending into Nevada and Southern Oregon.

Among the industries which have been established here are the Yuba Construction Company, with a half-million-dollar plant, the Marysville Ice and Cold Storage Company, the Yuba Bottling Works, the Marysville Woolen Mills, Sperry Flour Company, as well as various fruit plants, such as the cannery of the California Fruit Canners' Association and the packing house of the J. K. Armsby Company. There are various creameries, planing mills, lumber yards, foundries and machine shops, all of which tend to substantiate Marysville's nickname—"the biggest little city on the Coast"—a designation which is most apt. Marysville's present population is rapidly increasing.

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*Biography, page 269.

Although a historic town, Marysville is modern in every respect, having among other things fifteen miles of sewers, a four-mile system of electric street railway, an elaborate street lighting system, a modern gas and telephone service, a modern fire department and fire alarm system, a $75,000 public library, holding 10,000 volumes, three banks, six hotels and numerous lodging houses, six churches, and some of the finest modern school buildings in the State.

The climate is delightful and healthful, the fact of there never having been an epidemic of any contagious disease bearing strong testimony to the latter. The city water supply, which is obtained from deep artesian wells within the city limits, is not only abundant in quantity but excellent in quality, purity and wholesomeness.

Despite Marysville's splendid facilities for manufacturing industries, with its rail and water transportation, to say nothing of its terminal rates, the brilliant outlook for its future is perhaps attributable to its central location in the midst of a vast farming and horticultural country. Space does not permit of a description of the agricultural lands, therefore suffice it to say that all of the agricultural and horticultural products which can be grown in California thrive in this section, many of them commanding prices considerably in advance of those paid in other favored parts of the State; and the fact that these lands can be bought at reasonable prices assures a development of almost every acre tributary to the city.

YUBA CITY

Just across the Feather River, in Sutter County, is located Yuba City, the county seat and largest town of Sutter County, a thoroughly up-to-date community, situated on the Feather River at the head of navigation.

Its homes are electric lighted. There is a $30,000 high-pressure water system. The Southern Pacific and Northern Electric railroads serve Yuba City, and an electric 15-minute service runs to Marysville, which lies across the river.

The plant of the Yuba City Milling Company has a capacity of 200 barrels of flour and 45 tons of feed a day.

The fruit packing plant of Rosenberg Brothers and Company is here, as is the cannery of the Central California Canneries Company, employing 350 people. The establishment of J. B. Wilkie & Company dries 1,500 tons of grapes and 2,500 tons of prunes a year.

One of the Yuba City canneries shipped 100,000 cases of peaches in 1913 and a larger quantity in 1914. The same cannery sent out 50,000 cases of canned tomatoes in 1913, while the 1914 output was greatly in excess.

Yuba City has a national and savings bank, a modern hotel, a flour mill, a lumber yard, several churches, a fine public school building, a creamery, and many prosperous mercantile establishments.

The court house and hall of records are surrounded by a beautiful park, facing which is Mission Hall, a county auditorium used for conventions and meetings.

Yuba City is noted for its beautiful homes, surrounded by large gardens, and the wide streets, shaded with orange, magnolia, olive and walnut trees, form avenues leading out into the great Feather River fruit district.

To those who are interested, read carefully the data

Photo by
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E STREET, ONE OF THE RESIDENCE STREETS OF MARYSVILLE, YUBA COUNTY on page 255 and following giving a general description of Yuba County, where we hope to see permanently established a good strong colony of our people; also read the description on page 252 of Sutter County, adjoining our first centers, and where conditions are similar.

Now, dear reader, the question of whether the plan outlined in our previous pages and endorsed by so many of our leading men for the extension of our church's interests in this land by the Western Sea is the best or not, is plainly placed before you. Knowing our people as we do, their industry, integrity and true worth, and knowing the great opportunities that here await you, we believe it to be one of the best possible plans and stand ready by our earnest efforts to help carry it to a successful fruition.

COLONEL E. H. MERRILL

Colonel Merrill was born at Concord, New Hampshire, 1856. He was educated in the public schools of his home city, at the United States Military Academy, West Point, New York, and at Harvard Law School, Cambridge, Massachusetts, where he in 1882 obtained the degree of LL.B. He practiced law at Boston, Massachusetts, and Portland, Oregon. Being a man of exceptional mental qualifications, he soon became one of the leading men of his profession. His health, however, did not permit his continuance of indoor life. Therefore, in 1886, he engaged in commercial pursuits, which he is prosecuting this present day. The Colonel is a man of sound business judgment, of keen sagacity and comprehension, and of great adaptablity in creating, accepting and developing new and original business fields and opportunities. For more than thirty years he has been identified with one of the largest corporations of the world operating in the Pacific Coast states and territories. For over a quarter of a century he has been closely associated in the development of the resources of

COLONEL E. H. MERRILL

Photo by McCurry Foto Co.

HALL OF RECORDS, SUTTER COUNTY

Board of Supervisors, Sutter County
W. J. Gray, A. E. Schellenger, F. H. Graves, Samuel Gray, Alvin Weis (Clerk)

Oregon and California, and has done much pioneer work in these two states that has materially helped them commercially and financially. Of Caesar of old it is said that, whilst conducting his campaign across the Alps into Gaul, he was engaged in writing a Latin grammar and dictating half a dozen letters at the same time. Such Caesars of superior mentality we possess even in this modern and materialistic day, and Colonel Merrill may be truly said to be one of them. The plans and projects simultaneously emanating and receiving impetus from his fruitful brain are too many to enumerate in a brief narrative. It is true of this man that he is interested in all movements looking to the betterment of human society in its various ramifications.

While practicing law in Portland, Oregon, he took active part in the organization of the National Guard of the State, and all the years of his residence there, he was prominent in National Guard circles.

In the critical days of San Francisco, following the great fire and earthquake of 1906, he earnestly threw himself and his energies into the relief work for the benefit of that city and its stricken residents. He formed a relief committee of his own, conformable to the ideals of the great corporation with which he is connected. He was in sole charge of the distribution and expenditure of large sums of money emanating from that source, but not thrown into the general relief fund of the city.

At the latter end of the year, 1906, it was reported to the church council of the Synod of the Norwegian Evangelical Lutheran Church of America that a certain gentleman of San Francisco had conveyed a considerable sum of money distributed in the relief work done by the local clergymen of said church body. In this narrative it may be of interest to dwell a little more fully on the incident connecting us with this gentleman. It was in the middle of a night following closely upon those calamitous days of 1906. Some one rings at the bell of the house where the writer and his family were temporarily sheltered. "Good evening," was the word from a gentleman at the door. "Are you a member of the relief committee connected with the Norwegian Lutheran church?" The question being affirmed, he continued, "I have some money at your disposal. I know all about your good work. I desire the co-operation of your committee in the distribution of funds in my possession. I am in a hurry. Take these $200 tonight. More is coming. I will see you again very shortly. Good night." It is needless to say that this visit was an unusual surprise and made a deep impression on the recipient of such unexpected favors. And the same gentleman came again and again, each time bringing $200 for our relief work. When his last visit had taken place, a large sum of money had been placed in our hands for distribution among our people. But he did not bring only money, also household goods, clothing and groceries. The man who had thus befriended us and so materially helped the committee in its relief work was Colonel E. H. Merrill. The great generosity of the Colonel and also of the concern which he represents has

Photo by McCurry Foto Co.

YUBA COUNTY COURTHOUSE, MARYSVILLE

Board of Supervisors, Yuba County

William J. Mellon (chairman), Frederick Roberts, Phillip J. Divver, John J. Casey, David Morrison, J. F. Eastman (Clerk) been officially recognized by the governing body of our church.

Colonel Merrill is a scion of an old New England family, dating back to an early period in the history of our country—the year of 1635. Members of this family have taken part in the Revolutionary War, and since then they have fought in the battles of every war of the United States. The Merrill family has also been prominently connected with the work of the Methodist Episcopal church in America. For more than 125 years the Merrills have contributed many of the leading clergymen of said denomination. Colonel Merrill's father was a clergyman, the sainted Rt. Rev. John W. Merrill, D.D., formerly president of McKendree College at Lebanon, Illinois, and for many years professor of the Methodist General Biblical Institute at Concord, New Hampshire, which institution afterward became the Boston University.

In 1893 Colonel Merrill was married to Emma Louise Lyman. One child, Helen, is born to them. They reside at their palatial home in the exclusive district of Claremont, Berkeley, California.

As already related, the writer of this narrative became acquainted with the Colonel during the trying days of 1906, and since then it has been his good fortune to retain the friendship of this man, and to learn to know him more and more. He will never forget the Colonel's tender solicitude during his late illness. The writer is free to state that the Colonel became a means in the hands of Providence to save his life. When all human resources seemed to be exhausted, the Colonel found and pointed out the way in which his dying friend came back to life. It is needless to say that such deeds of human kindness can never be forgotten.

Colonel Merrill is a great believer in the Scandinavian race. He recognizes what an asset they have been in the upbuilding of the American nation. He never tires of speaking of the wholesome influence exerted by the Scandinavians, traceable in all the channels of activity and progress of American society, be it in the pursuit of industry, commerce, religion, politics or agriculture. To a pre-eminent degree of excellence, in the mind of the Colonel, have the Scandinavian people reached along the lines of agriculture. ''They are empire builders agriculturally,'' says the Colonel. ''They are not people who come to stay for a little while; they come to build homes and to stay permanently.'' Therefore Colonel Merrill welcomed the movement to colonize California by the Scandinavians, and not only did he welcome this movement, but in history we read about powers behind the throne—such a power the Colonel has been in the movement which finally crystallized in the organization of the Scandinavian-American Colonies of California.

KNUTE B. NORSWING

Mr. Norswing was raised in Goodhue County, Minnesota. His father came from Vang in Valders, Norway, when nine years of age. His mother came from Flaamsdalen, Sogn, Norway. His grandmother came from Reime, Voss, Norway. He was a member of the Vang's Church. Received the usual common school education. Entered the School of Agriculture, University of Minnesota. Graduated with the class of 1893. Worked for ''The Farmer'' of St. Paul, Minnesota. Taught school for three years. Bought the home farm. Was married to Marith A. Höverstad, a pure bred Valdris girl of rare qualifications.

Mr. Norswing was successful at farming, but because of failing health in the fall of 1899 he came to California to recuperate. Worked for the ''Pacific Rural Press'' of San Francisco, thus coming continually in contact with farmers and learning of their successes and failures. In 1901 he went East again for a year and a half but good old Goodhue County did not appeal to him anymore after the taste of California. In the fall of 1902 he went to Arizona, but after a month's investigation decided that California was preferable. He moved to Los Angeles in December of that same year and bought a six-acre farm two miles out of town. On one of the corners of the little acreage a store building was erected. His business grew and grew in volume. He sold out. Next a paint business was started in the city of Los Angeles. This grew even faster than the former. A factory was built; the grinding of colors and paint manufacturing undertaken. The business was incorporated under the name of Sunset Paint Company. Next he established a retail store and office in the heart of the city of Los Angeles. K. B. Norswing has been president from the beginning.

KNUTE B. NORSWING

In 1909 Mr. Norswing purchased a grain and alfalfa ranch of 321 acres in Kings County. He spent the summer of 1910 traveling in Europe. Among numerous places visited was Oberammergau, where he saw the ''Passion Play.'' On returning he obtained an interest in the Forest City National Oil Company of Santa Paula, a closed corporation operating several producing wells. Mr. Norswing is one of its directors. He started a general merchandise store which, together with the farm, soon entirely surrounded by the city of Los Angeles, he successfully disposed of. In 1911 he purchased another farm at Fullerton, California, "El Rancho Del Oro," where walnuts, Valencia oranges and other fruits grow in abundance. He sells direct to consumers, sending the products out in small parcels by express and parcel post to all parts of the country. Merchandising failed to interest Mr. Norswing. Farming and the study of soils and plant-life mostly absorb his interests. Mr. Norswing is a firm believer in California—in all the varied potentialities and opportunities she has to offer the homeseeker. He came out here to see for himself. He has seen and is convinced. He is one of the sponsors and main spirits in the movement resulting in the organization of "The Scandinavian-American Colonies of California."

HOLDEN L. RISETTER

Mr. Risetter was born July 31, 1853, in Lee County, Illinois. His parents' names were Lars L. and Gertrude Lenning Risetter. He was educated in the district school of Lee County. Mr. Risetter is born and bred to the soil. To become a successful farmer was his ambition as a young lad. This ambition was also realized. As a farmer he continued until 1910, when he retired and moved to Beloit, Wisconsin, leaving his extensive landed possessions in the care and keeping of his sons. The success of Mr. Risetter as a tiller of the soil is well known far beyond the community where he spent most of his life. When Mr. Risetter retired, he belonged to the class whose fortune is fast approaching the seventh figure. During the course of years, however, Mr. Risetter was not only attending to his farm. Other interests attracted his attention and taxed his mighty energies, notably the buying and selling of farm-land in the various parts of the Middle States. Mr. Risetter enjoys the reputation of being a judicious trader. From time to time he has acquired large tracts of land, and again profitably disposed of them. Nor did he confine his efforts to country real estate. He is also credited with much activity in handling town lots and city realty. The city of Chicago became a fertile field for many of his most successful deals. But more distant parts of our country, too, enlisted his attention. His real estate interests in Colorado are well known to many. A year ago he paid California a visit, where he made an extended stay covering more than a year. The purpose of this visit was to get a little rest and recreation, but he did not always rest while here. He had heard much about the opportunities offered the settler in this fair State. Now he was accorded the privilege of studying conditions, and he made ample use of it. No one returned East more satisfied with his visit to California and conditions here as he found them, than Mr. Risetter. During his stay he also came to know of the Scandinavian-American Colonies, and became much interested in this movement. It is Mr. Risetter's decided opinion, that it is our duty to try to guide and gather into settlements those of our countrymen who leave the Eastern States and come here to seek a home. He was much impressed with the immensity of the unpopulated stretches of land in California. Nor was it a small surprise to him to learn of the different varieties of soils in well-nigh every part of the State—how good soil and near-good soil and poor soil are found lying side by side, looking the same, but far from being the same in quality. All this convinced him of the necessity of authentic and conscientious advice in the matter of assisting the Eastern homeseeker. He was, therefore, much interested in the Scandinavian-American Colonies, an organization called into being for no other purpose than to educate and direct our people in the matter of finding homes in these distant and, to them, unknown regions of the West Coast. And Mr. Risetter's interest in this project did not only manifest itself in commendable words, but also in substantial financial support and in himself becoming an associate of the movement.

HOLDEN L. RISETTER

Mr. Risetter was married twice, the first time, November 11, 1875, to Julia Christopher, the second time July 10, 1901, to Isabel M. Boyd, the Reverends J. J. Tackle and J. Nordby, respectively, officiating. The following children were born to them, Mrs. Gertrude Louise House, Mrs. Bessie Christina Koto, Lewis, Thomas Clarence, Christopher, Mrs. Anna Luella Fourtilott, Dr. Ernest Adolph and Leonard Orrin. The Risetters are now located at Rockford, Illinois, where they expect to spend the balance of their days.

GUSTAV M. STERUD

Mr. Sterud was born in Dane County, Wisconsin, September 9, 1868. He was educated in the common schools of South Dakota. His parents were Martin and Ingeborg Sterud. Until the age of twenty-three he was variously employed on the farm. At that time he took up the business of insurance. This gave him an ample opportunity to study the various phases of society—church and secular—writing insurance in twenty-five different states. The last twelve years he has been working in the Pacific Coast territory as district superintendent of the Mutual Life of New York. During this long time of constant travel he also learned to know the conditions of the Lutheran Church on the mission field. Mr. Sterud was raised as a strict Lutheran, of the good old orthodox type. This early training ever stayed with him and became the lodestar of his life. In his day, he has also had the privilege to help in the upbuilding of his dear church. All in all, it has fallen to his lot to assist in the erection of six church edifices, and to be a member of fifteen different congregations—twelve Norwegian Lutheran, one German Lutheran (Missouri) and two English Lutheran.

It may be of interest in this connection to point to a few facts relating to his membership in the German Lutheran congregation of Reno, Nevada. When the Sterud brothers, G. M. and J. M., came to Reno as district representatives of the Mutual Life of New York, they found no church of their own at the place. The two brothers had many children. Something had to be done in the matter of religious training for these little ones. And what should they do? No pastor of their own Synod to resort to. Our German brethren, however, had a representative at the place in the person of Rev. Franz E. Martens. To him they presented their plight and requested him to take up the matter of starting an English mission or at least a Sunday-school for the children. The attempt was successful. The Steruds joined the German congregation and became the means of establishing, on a firm footing, an English Lutheran mission at Reno. In the course of time, a beautiful church was built, where both the English and the German languages are used, and where the Germans and the Scandinavians of the community may find a church home.

It is a well-known fact that California has of late years become an object of attention to Eastern farmers. And not least are the Scandinavians of the Middle West interested in the agricultural opportunities of this State. The president of the Pacific District, Rt. Rev. L. C. Foss. has been virtually besieged by inquiries concerning land conditions down here. Being the president of our synodical district he is looked to as the one who is in position to give authentic information. Our local pastors, too, and not least the writer of this article, have incessantly been solicited for such information. In conference with Rev. Foss the conclusion was reached that it was a part of our duty to study agricultural conditions of California, so as to be able to speak intelligently on this subject and give the desired information.

The condition of our church in California was another factor in determining our course in the matter. Our church is not strong in this State. It is poorly represented outside of the cities. And our city congregations are weak and seem to have enough to do to carry on their local work. Little or nothing are they doing to assist in the general work of the Synod. And it is a notable fact that the country congregations are and have been the financial backbone in the work of our church in America. Therefore strong inland congregations in California is our aim. To reach this aim, we resolved to enter upon an intelligent campaign of directing to California such of our people as constantly leave the Eastern States and come west in quest of new homes. Our plans were crystallized by the organization of what is known as The Scandinavian-American Colonies of California.

Mr. Sterud became one of the main souls in this movement. Being a practical farmer from boyhood the study involving farm conditions seemed to him a very fascinating thing. With his usual determination he threw himself into the work of investigating the agricultural potentialities of California. Fully two years he was engaged in this work. Having satisfied himself that California is a desirable country to live in, he took an effectual hold of the organization of the Scandinavian-American Colonies. After traversing the State from one end to the other, thoroughly investigating conditions, he made several trips to the Eastern States in the interest of the movement. In his judgment there are many sections of this State comprising desirable land for the settlement of our people, but for the first settlement he recommends Central California near Marysville. In this part of the State, therefore, the Scandinavian-American Colonies has secured the first tract of land for its colonization purpose, and with pride and pleasure we make the statement, that we may now look upon a substantial beginning.

March 25, 1892, Mr. Sterud was married to Miss Rose C. Thorsen. Two children have been born to them, Martin O'Neill and Jennette Elizabeth. In 1913 Mr. Sterud and his family moved to San Francisco and reside in Howard Street. They are members of Trinity Church, where, with never-abating interest and untiring energy, they are continuing their good work in God's Kingdom.

ROBERT HARMER COUNTRYMAN

Mr. Countryman was born in Philadelphia, Pennsylvania, September 11, 1864.

The Countryman family originally came from Holland and settled in New York City about 1621. It furnished a large number of soldiers to the Revolutionary army, eight Countrymans in one New York company. John Countryman, the great-grandfather of R. H. Countryman, was a lieutenant in the Continental army under George Washington; made the campaign in New Jersey; crossed the Delaware River with Washington; accompanied him to Valley Forge, and after the Revolution settled in Philadelphia. His son Christian was a soldier in the War of 1812, and was married to an English Quakeress, hence on the paternal side R. H. Countryman is a mixture of Dutch and English blood. His mother was of noble Scotch ancestry; her family, for hundreds of years distinguished in Scottish history, furnished many members of the Scottish bench and bar. The male members of the Countryman family have been clergymen and lawyers, so that on the paternal and maternal side Mr. Countryman naturally is a member of the legal profession. Mr. Countryman graduated from the law department of the University of California, receiving the degree of LL.B. He came to San Francisco in April, 1885, entering the law office of Jarboe, Harrison & Goodfellow as a student, and, when admitted to the bar, he became a member of the firm. Being a man of rare mental qualifications Mr. Countryman created for himself a reputation of being a great attorney, in fact, he is rated as a *primus inter pares* of his profession. In the course of years there have been associated with him in the practice of law some of the most celebrated men of the State, among whom we may mention the name of Justice Harrison, who continued in partnership with Mr. Countryman until the former was appointed presiding judge of the District Court of Appeal.

ROBERT HARMER COUNTRYMAN

The estimate a community puts on a person who has lived and labored in it for years is a pretty just one. The estimate this community puts on Mr. Countryman may be seen by the numerous calls for service, in the course of years it has made upon him. Thus Mr. Countryman was appointed to serve on the Committee of Fifty which had charge of the rehabilitation of San Francisco after the great catastrophe. He was also appointed to serve on the sub-committee of five on housing the homeless. In addition to other duties, required of him by this community and State, he assisted in drafting the laws that were submittted by Governor George C. Pardee to the special session of the Legislature of 1906 for the relief and rehabilitation of San Francisco.

He has been practicing law in San Francisco for nearly thirty years, and is also a member of the Oregon bar, having been engaged to argue a number of important cases before the Supreme Court of the state of Oregon.

On June 26, 1889, Mr. Countryman was married to Jennie A. McWilliams. Two sons have been born to them, Harmer William and Ralph Harrison, each of whom, is attending the University of California, one studying to be a scientific farmer, and the other to be a lawyer. The Countrymans reside in Fillmore Street, San Francisco.

Mr. Countryman is a member of the Episcopal church. Effectual work in the Sunday-school is, in his estimation, one of the vital issues confronting the church. Though busy lawyer he be in this great metropolis, he is never too busy to find time for attending to his church duties. For nine years he has instructed the boys' advanced class in Biblical history and knowledge. Mr. Countryman is naturally alive to every movement looking to the upbuilding of his city and State. The organization of the Scandinavian-American colonies, whose object it is to direct the immigration to this State of Scandinavian people, became to him glad tidings. Being of Dutch descent himself, he naturally understands the significance of colonizing this State with a people of that type, in mind and make-up, the same as his own. He therefore bids this movement a hearty welcome, and bends his every effort in promoting it. Mr. Countryman is the attorney of The Scandinavian-American Colonies of California.

JOSEPH BRORBY

As touching a biographical sketch of Mr. Brorby, the writer takes the privilege of quoting in part from the History of Minnesota, edited in 1915:

"Joseph Brorby was born December 1, 1879, on a farm in Clayton County, Iowa, the son of Jacob Paulson Brorby and Oline Brorby. The family located at Decorah, Iowa, in 1886. There Mr. Brorby attended the public schools until fourteen years of age, when he entered the preparatory department of Luther College, in 1899 graduating from that college with the degree of Bachelor of Arts. In 1904 he completed the theological course at Luther Seminary in St. Paul, with the degree of Bachelor of Divinity. In the fall of 1904 he entered the Minnesota State University College of Law, taking the night course, where he received the degree of Bachelor of Laws in

JOSEPH BRORBY

1906. During his course at Luther Seminary, Mr. Brorby was assistant librarian, 1902-1904, and president of Coetus, the student board of control, 1903-1904. The years 1899 and 1900 were spent in teaching, and as assistant cataloguer at Luther College library. In the summer of 1904 he became a potent factor in establishing the Northwestern branch of the Lutheran Publishing House, an Iowa corporation, at Minneapolis, continuing in the capacity of manager until 1908, since which time he has been engaged in the active practice of law with offices in the Security Building, Minneapolis, in which profession he has proved his powers to gain and retain a large general practice. He is vice-president and counsel of Norden Investment Company. Mr. Brorby has always been a Republican; was elected a member of the City Council of West Decorah, Iowa, in 1902. Mr. Brorby is a member of the Odin Club, of the Minneapolis Civic and Commerce Association, of the Twin City Luther College Club, and of the Men's Club of Our Savior's Church. He is one of the directors of the Minneapolis Humane Society and of the Minnesota State Bureau of Child and Animal Protection. He is a member of Our Savior's Norwegian Evangelical Lutheran Church.

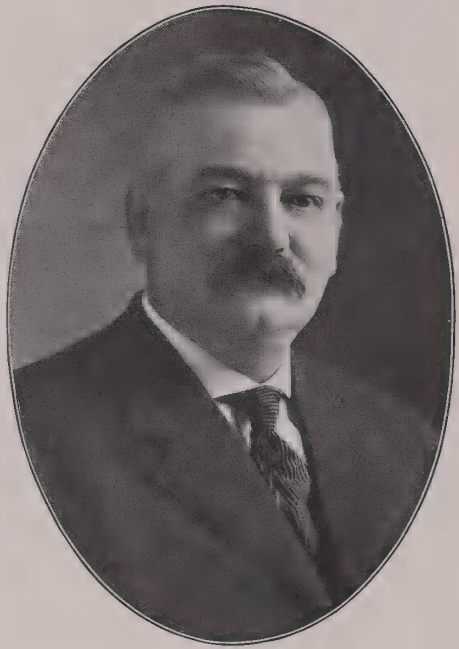
Mr. Joseph Brorby has taken a large interest in the movement represented by the Scandinavian-American Colonies of California. Together with his brother Paul he has been a main factor in organizing the Eastern end of the business, acting in the capacity of attorney, with headquarters in Security Bank Building, Minneapolis, Minnesota.

September 6, 1905, Mr. Brorby was married to Eda S. Simonson, Rev. J. W. Preus of Our Savior's Lutheran Church of Minneapolis officiating. Three children have been born to them, H. J. Vidar, Sylvia Eda and Joseph Reidar, the last deceased. Mrs. Brorby comes from the Simonson family so well and favorably known in the social and commercial world of Minneapolis.

PAUL BRORBY

Mr. Brorby was born August 6, 1862, in Clayton County, Iowa. His parents' names were Jacob Paulson Brorby and Oline, née Rulland. Mr. Brorby was educated in the public schools of Iowa. At the Decorah Institute, Decorah, Iowa, he received his business education. After finishing school he entered the mercantile world, where he continued for many years. Early in life Mr. Brorby became much interested in politics. Gradually this interest developed into political aspirations. Mr. Brorby's natural make-up peculiarly fitted him for entering politics. His mental strength and native sagacity, his exceptional ability for judging human nature, coupled with an amiable personality, create for him a host of admiring friends and make him a natural leader of men. In the course of years he has served on numerous important civic committees and boards and held positions of high trust in his home community. From 1894 to 1900 he was clerk of the District Court of Chickasaw County, Iowa. In politics he is a staunch Republican and takes a leading part in every returning campaign in municipality, county and state. In 1915 he was one of the presidential electors on the Republican ticket for the state of Iowa.

Since 1900 Mr. Brorby has been engaged in real estate operations. He is considered an authority on all subjects pertaining to soils, climate and agricultural conditions in the Middle West. His conscientiousness and conservatism as a real estate operator are well known. He can not be induced to enter into any get-rich-quick or wildcat real estate schemes. He has only one policy, that of constantly keeping in view the good of the settler. His operations so far have mostly been confined to the territory embraced in the great Middle Western States and Canada.


PAUL BRORBY

Of late years Mr. Brorby's attention was again and again directed to California by incessant inquiries regarding agricultural conditions there. Hence the fact that California will be the land of promise to Eastern homeseekers had gradually taken a hold of his mind. The organization, therefore, of the Scandinavian-American Colonies was good news to him. Nor was he tardy in connecting himself with this movement. Straightway he made a trip to California to obtain first-hand information regarding farm conditions. Having carefully studied the situation, together with matters relating to the Scandinavian-American Colonies, he returned home and in company with his brother, Joseph Brorby, effected the so-called Eastern Sales Organization of The Scandinavian-American Colonies of California, Mr. Paul Brorby taking the general agency and Mr. Joseph Brorby the attorneyship, with headquarters in the Security Bank Building, Minneapolis, Minnesota.

January 22, 1890, Mr. Brorby was married to Lovie Estella Shaver. Three children have been born to them, Lucile Ethelind Marie, Jacob Vernon and Paul Shaver. Ever since their marriage New Hampton, Iowa, has been the home city of the Paul Brorby family.

HERMAN GREY SQUIER

Mr. Squier was born at Gibsonville, Sierra County, California, October 26, 1861. His parents were Eliakim Squier and Catherine Caroline Squier. They were Canadians of English descent and emigrated to California in 1851. Mr. Squier was educated in the public schools of the State and in the State Normal School at San Jose, graduating from the latter in 1885. Much of his boyhood was spent in working in the mines until 1882. Then he taught school until 1901, most of the time holding the position of principal in San Jose, California. Thereafter he entered the Civil Service and held a position in the postal department of the Philippine Islands in 1901. Whereupon he was transferred to the school department of the Islands, being employed as organizing superintendent. In the early part of 1903 he was re-transferred to the postal department, where he served as assistant and as acting postmaster of the city of Manila. In the latter part of 1905 he returned to the United States with his family, and finally resigned from the Philippine Island service in the latter part of 1906. Since then he has been engaged in the business of handling irrigated lands in California. Mr. Squier was bred to the soil, and no department in the province of human interests is more fascinating to him than that of agriculture. The agricultural potentialities of California have been the object of Mr. Squier's study and attention from the early years of his manhood. He has especially made an exhaustive study of the methods of irrigation and the work of colonization, and the handling of California lands. He is accordingly well known in this Western domain as an authority on California soil and farm conditions. Hence his services have been secured by some of the largest real estate operators in this State. From 1908 to 1913 he was the sales manager of the Kuhn Syndicate, part of this time representing said concern in Chicago, Illinois. In 1914 he successfully handled a sub-division of his own in Merced County, California. During the Exposition year (1915) he was employed by the Sacramento Valley Exposition Commission, having charge of the Bureau of Information in San Francisco.

HERMAN GREY SQUIER

Of the many public spirited men of this community interested in the Scandinavian-American Colonies of California, Mr. Squier stands among the first and foremost. During his sojourn in the Middle West he learned to know what the Scandinavians have done in the upbuilding of our country—especially along agricultural lines. With enthusiasm he embraced the movement inaugurated for the purpose of helping Scandinavians who desire to establish permanent homes in California. Many of the leading men of our church found it necessary to investigate this movement, and so made many trips to California at various times. It is a significant fact that Mr. Squier was one of the men chosen to accompany our church dignitaries on their visits to the various parts of the State. Mr. Squier is therefore well known to the leading men of our church, and his name to them is a synonym of honesty and integrity.

May 19, 1887, Mr. Squier was married to Miss Annie L. Taylor. Three children have been born to them, Annie F., Silva Ginsey and Alma May, the last deceased. The Squier family resides at their home in Masonic Avenue, San Francisco.

IVAR EIMON

[Representative of Eastern headquarters, Scandinavian-American Colonies, on trip to the West coast, inspecting California farm conditions in general and holdings of Colonies Company in particular.]

It was really a pleasant experience to meet Mr. Ivar Eimon, the bearer of a name so well known in Norwegian America. Much I had heard of Mr. Eimon, of his personal qualifications and of his success in life materially, as well as the very prominent part he and his family have taken in the upbuilding of the church of our fathers in America. And only a few moments of my first interview with Mr. Eimon were needed to substantiate the truth of the report that had come to our ears long before this manly man, in bearing and stature a veritable type of the Viking race, had reached our Coast.

Mr. Eimon came to California on a specific errand, For many years he had contemplated moving to a milder climate, and often he had thought of California. But it was far away and besides a land of lurid fame. He could not always put credence in the very favorable reports concerning opportunities for the settler in this land of sunshine and flowers. To his mind the reports had been so flowery and so full of sunshine, that he feared, lest some clouds and shadows were lurking behind the profusion of descriptive words. Then finally he learned of the Scandinavian-American Colonies and read the reports emanating from that source. The aims and purposes of this association were in perfect consonance with his own feelings. Too often he had lamented the fact that our good church people move away from their church communities and well-cultivated farms in the Western Middle States and scatter here and there and become lost to church and God and all. The endeavors of the men espousing the movement of the Scandinavian-

American Colonies coincided thoroughly with his sentiments and appeared to be the embodiment of the thoughts on the subject he himself, and many serious thinking church-men with him, had entertained for many years. And at once he became interested and connected himself with the men at the head of the Eastern end of the association and secured all the information available concerning the move.

And to make a long story short, Mr. Eimon decided to go to California to see for himself. He was in the state for many weeks. And like a wise man he did not go direct to the local representatives of the association, but stepped off the train and all by himself inspected the holdings of the Scandinavian-American Colonies and investigated everything in connection with the land, climate, quality of soil, crops commercially and non-commercially raised, water, transportation, market, in brief, everything necessary for the homeseeker to know, nor did he forget to observe the impressions extant in the local community concerning the backers of the Scandinavian-American Colonies in the West. Having thoroughly satisfied himself on all and every point in question, he came to San Francisco to make further inquiries. Here he had an opportunity to go deeper into the subject and to become acquainted with the men connected with the Western end of the association.

With all this information, Mr. Eimon sets out in a new direction, for coming as a representative from the Eastern Middle West to study conditions here, it was necessary to study every phase of the subject as touching agrarian conditions here. After a few weeks travel over marsh and desert, through orchard and meadow, spending ample time in town and city and rural district for acquiring information, he returned and the first word he uttered was "California for me." As regards the selection of land for the first Scandinavian-American colony, he declared that he had not seen anything to compare with it. The well-cultivated lands that he had seen would range from $300 to $1,000, yes, and even $2,000 an acre.

"I have never seen in all my travels throughout this state any land that can compare in price and in quality with the tract secured by the Scandinavian-American Colonies. And now, my dear friends, I stand ready to substantiate my convictions, not only by word, but by deed. I am now going back home to dispose of some certain interests and re-invest in California. I want to become one of you. I believe in the cause represented by the Colonies Company. It has been my conviction for years that something along that line should be done and that it was our duty as church people to do so, and from now hence, I intend to cast my lot with your association."

Mr. Eimon was born June 5, 1854, on the line between Valders and Land, Norway. His father's name was Ole Oimoen, and his mother's name was Siri (née Thomle), who also came from Valders. In 1862, as an eight-year-old boy, Mr. Eimon, together with his parents, emigrated to America. His parents left Norway to better their economic conditions and to insure the future of their many children. The Eimons settled in Dane County, Wisconsin, but six years later they moved to Pigeon Falls, where they have been engaged in agricultural pursuits to this present day. Mr. Eimon is the eldest of four boys who succeeded their father in taking care of the old homestead. The success of the Eimons is well known far beyond the limits of the home state. Eimon's business career has always been along agricultural lines. In many parts of the Middle Western States he has owned considerable areas of land which he has cultivated and, in the course of time, successfully handed off in the real estate market.

On July 4, 1886, Mr. Eimon was married to Margrethe Heyerdahl, Rev. M. Thorsen officiating. Five children have been born to Mr. and Mrs. Eimon, Sigvald, Ove Max, Paul Kruger, Sigrid and Margrethe. The three of the brothers are running father's farm, while the youngest is preparing for entering professional life and is now studying at Gale College.

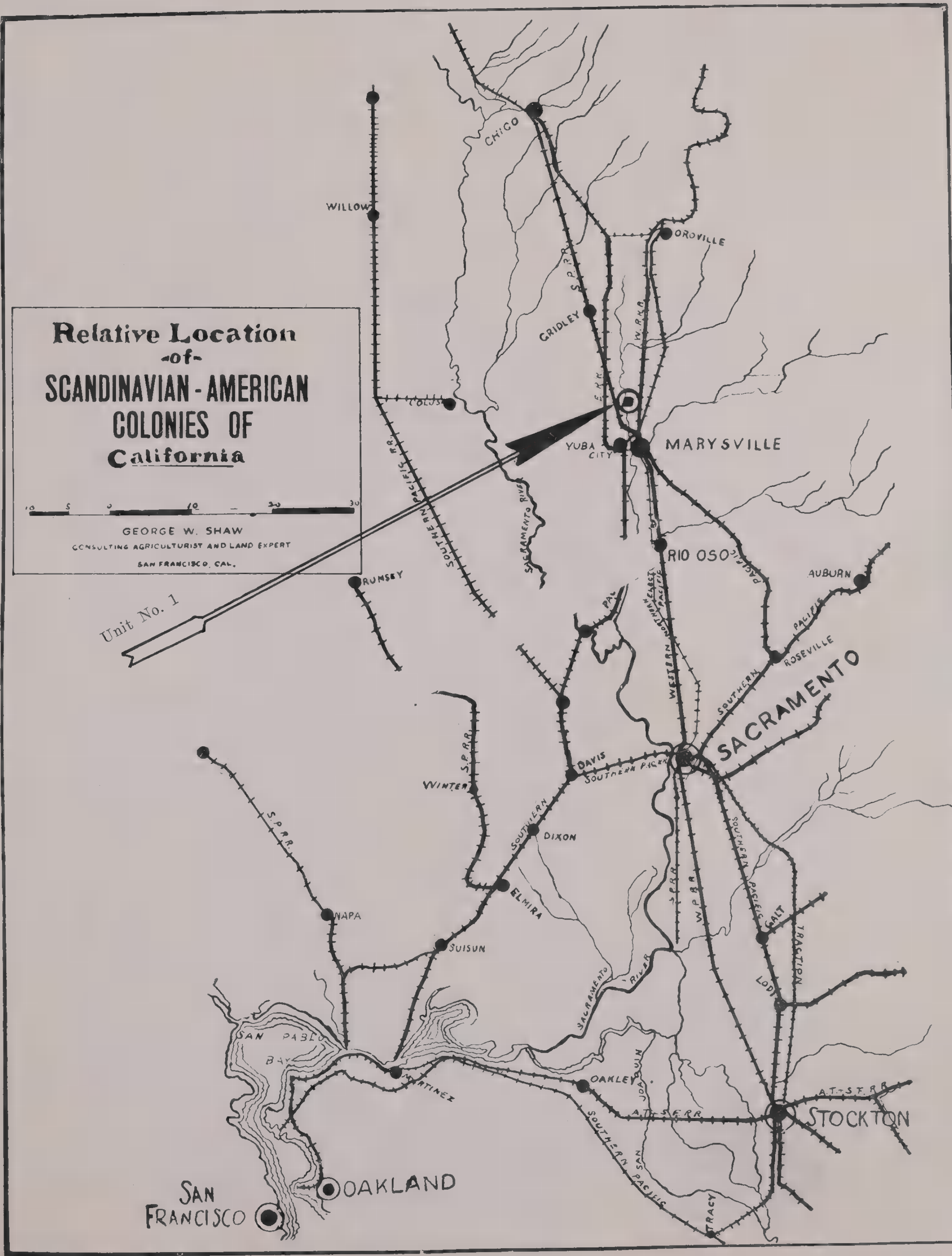
Mr. Eimon is a self-made man. It is, indeed, interesting to be granted an interview with him. He is at home on every subject, be it matters pertaining to the religious, political, educational or commercial world. Besides being a great reader of literary, scientific and religious works, of periodicals and the daily press, Mr. Eimon has traveled extensively in his life-time. He has visited most of the important centers in the world, notably those of Norway, Sweden, Denmark, Germany, France, Switzerland and Spain. The American continent he has traversed well-nigh in its entire length and breadth. Every state in the Union, except Maine, together with all the principal cities, he has visited, and wherever he has gone he has studiously observed agricultural conditions. It is, therefore, a very gratifying fact to hear what Mr. Eimon has to say concerning the agricultural potentialities of California.

Mr. Eimon has always belonged to the Synod of the Norwegian Evangelical Lutheran Church of America. His parents have a place among the pioneers of our Synod, and they have taken an integral part in the upbuilding of the Lutheran Zion in America. The history of the Eimons is inseparably united with the history of our Church. Whenever undertakings looking to the extension of the Church were decided upon, the Eimons were first and foremost in the councils and in contributing large sums of their ample means in promotion of the good cause. And not only was their generosity confined to the cause of the Church in the home country. Their church interest has reached far beyond the limits of the home congregation and the church of the home land, and extended to the benighted brethren sitting in the Valley of the Shadow of Death, who, too, have felt the blessing of the gifts emanating from their benevolent hand. Generously the Eimons have contributed to the extension of God's Kingdom at home and abroad. As an evidence of the interest Mr. Ivar Eimon has taken in all matters of the Church as well as of the confidence he enjoys in the Church, may be pointed to the fact that he from time to time has served the local congregation as representative at important synodical conferences and conventions, district and general.

Politically, Mr. Eimon is a Republican, and has always taken a live interest in local and state politics. In the course of years, he has served on many committees of municipality and state. For thirty years he has been a director of the local school board.

Henceforth it is the purpose of Mr. Eimon to spend many of his remaining days in California.

The outlook of the Scandinavian-American Colonies is bright beyond expectation. With inquiries constantly pouring in, and with men like Walter Forde, Eimon and Rev. Nervig in the lead, together with the Hansens and Christensens who settled there before them, the success of the Scandinavian Colonies is already assured. In this connection, it may be of interest to the reader to learn that Rev. Nervig of Volin, South Dakota, has secured a tract of land from the Scandinavian-American Colonies, and intends to move to California in the near future.



How to Reach California

ON THE SOUTHERN PACIFIC

THE traveler, tourist or homeseeker destined to the Pacific Coast will find that the Southern Pacific, which leads in mileage and safety of operation all western railroads, serves almost every important community and point of interest.

Five of the best appointed transcontinental trains are included in its operation: "Sunset Limited," "Overland Limited," "Pacific Limited," "San Francisco Limited," and "Golden State Limited." These range from extra-fare trains to those carrying both standard and tourist sleeping cars and are supplemented by excellent coastwise service embracing such trains as "Shasta Limited" between San Francisco, Portland, Tacoma and Seattle, and the "Owl" and the "Lark," with several additional daily express trains between San Francisco and Los Angeles.

From the cities of the Great Lake region and the Mississippi Valley the traveler on "Overland Limited," "Pacific Limited" or "San Francisco Limited" will go to San Francisco by the shortest and quickest route through Omaha and Ogden, including the famous Salt Lake cut-off, which is the admiration of the engineers of the world, and at the same time it affords the traveler views of lake and mountain scenery he never can forget.

By this route the traveler is taken through Nevada, whose natural forage makes it the pasturage of sheep and cattle by the tens of thousands. General farming has its place in the industries of the state and the National Government has supplemented the work of the citizens by great irrigation schemes now in operation. Nevada is one of the great copper, silver and gold producing states, the Tonopah-Goldfield district, Mason Valley district, and Ely district being known throughout the mining and smelting world.

Nevada is a state of great mountain ranges and of great basins. The basin of the Humboldt is traversed by the Humboldt River, which is crossed and recrossed several times by the traveler who takes this picturesque route. This is followed by the canyon in the Sierra Nevada Range through which the Truckee River flows. The traveler finds himself in ready access to Lake Tahoe, views Donner Lake of tragic story, and surmounting the Sierra, he looks down from the western slope of the Sierra Nevada Mountains upon a succession of scenes unrivaled in the world for their sublimity and varied grandeur. Within from to two three hours the traveler has descended from mountain to broad valley, with a series of surprises in quick transformation from mountain peak and forested heights to cultivated foothills and fruitful valleys that rival the best in France.

From quaint old-world New Orleans the "Sunset Limited," in connection with Southern Pacific high-class passenger steamers from New York, carries the traveler to California through the land of cane and cotton, the country of Longfellow's "Evangeline," and the empire of Texas with its bustling cities and its admirable winter resort, San Antonio, from which point the journey is made at low altitudes through New Mexico and Arizona. Or the traveler may journey westward by the "Golden State Limited" with all the comforts of travel through Kansas City and the Southwest, through New Mexico and Arizona to Los Angeles and San Francisco.

Arizona now leads the world in copper production; it is a great cattle-growing state and its agricultural growth has been marked. By a detour from Bowie to Maricopa, on the "Sunset Route," one may make the marvelous scenic auto trip of 120 miles over the "Apache Trail" from Globe to Phoenix, through the heart of Arizona's weird and picturesque grandeur. You can see ancient cliff dwellings and stop at the great Roosevelt Dam and the wonderful lake, thirty miles long.

The entrance to California, across the Colorado River at Yuma, along a route marked by old Spanish missions, finds its climax in the approach to Los Angeles, through orange, olive, date and palm groves.

If a more northern latitude is chosen, there is the "Shasta Limited" from Seattle or Tacoma, Washington, or from Portland, Oregon, through the valleys in southern Oregon. These valleys are remarkable for the mildness of their climate and the variety of their products. By this route the traveler crosses the impressive Siskiyou range, and skirts Mount Shasta, which has an elevation of 14,444 feet. From Shasta's base he continues on his way into the fertile valley of the Sacramento River, passing Shasta Springs and through the trees and flowers of the picturesque Sacramento Canyon, probably the finest canyon scenery to be found anywhere in the world. The Shasta Route is famous. It carries the traveler through a timbered district containing one-fifth of the country's standing timber.

By way of the Southern Pacific the traveler going and returning may pass continuously through new territory. Either going to or returning from San Francisco, via Ogden, the "Netherlands of America" may be reached by Southern Pacific steamers on the Sacramento River, passing through a region of dikes and levees, remindful of Dutch waterways and affording not only an enjoyable outing but a delightful means of varying a transcontinental journey.

Two lines are operated by the Southern Pacific between San Francisco and Los Angeles; one crosses the Tehachapi Divide by the famous loop, the other by way of Santa Barbara, traverses the productive valleys of Santa Clara and Salinas and runs for more than one hundred miles within sight and sound of the ocean surf. San Diego is only a few hours' run south of Los Angeles. Orange groves, mountains and beaches hold equal lure. Mount Lowe, with its famous observatory, and the Pacific Ocean may be visited the same day; from a dip in the snow one may plunge through the surf within compass of three hours.

From San Francisco the Southern Pacific will carry the tourist in less than three hours to Santa Cruz; in another hour Del Monte and historic Monterey may be reached, thence a short drive to Carmel-by-the-Sea with its old mission of the days of the padres. Four hours by rail will give access to Sacramento. In five hours Fresno, with its raisin and orange industries, in the heart of the San Joaquin Valley, is reached, and a two hours' longer run takes one to Paso Robles Hot Springs. Yosemite National Park, Lake Tahoe, upper Sacramento canyon resorts, Mount Shasta, Grant and Sequoia National parks, Mariposa Grove of Big Trees, the Kern and Kings River countries, and the Klamath and Crater Lake regions of Oregon, famous for their fishing, are from a night's ride to a day's journey distant.

Everywhere are to be traversed the macadamized roads of California, and the State highway is the joy of motorists. Fishing, hunting, golf, polo, tennis, mountain climbing, form a succession of outdoor joys in a climate of unsurpassed beauty with an environment in harmony. For that tired feeling the Pacific Coast is a wonderful tonic all the year round.

SCENE IN
THE YOSEMITE
NATIONAL PARK

ON THE SANTA FE

The Atchison, Topeka and Santa Fe Railway system traverses the heart of romantic America—the land of the conquistadores and padres, the pathfinders, traders and pioneers. Some of the most remarkable scenery in the world is found on its lines.

The Santa Fe is the only railroad between Chicago and California under one management all the way. It is double-tracked for more than half the distance and safeguarded by block signals the entire distance. Fred Harvey manages the dining car, dining room, lunch counter and hotel service. And the Grand Canyon of Arizona, earth's greatest scenic wonder, is reached only by the Santa Fe.

When you start on the Santa Fe you go through promptly, because it's *''Santa Fe all the way.''*

The altitude through Arizona and New Mexico, averaging a mile above sea level, insures *pleasant weather in winter* and a *cool summer climate.*

There are many unique *scenic attractions,* such as the Grand Canyon of Arizona, the petrified forests, Indian pueblos, and prehistoric ruins. Always something interesting to see. Dustless, oil-sprinkled track in sandy districts—the engines in California and Arizona burn oil.

For half a day Santa Fe trains pass through one of the largest pine forests in the United States, located in central Arizona.

Finally, the highest mid-summer temperature of this region is lower than that of many of the Eastern cities. The ''sensible'' temperature is considerably less, owing to lack of moisture.

The wise traveler endeavors to escape snow blockades and below-zero weather.

That's the reason so many persons prefer the Santa Fe. It is the middle route across the Rockies and the most direct. It avoids the two extremes of heat and cold, of high and low altitudes.

Some snow falls somewhere and at some time along every transcontinental line to Chicago. You can not escape it.

But if you do happen to strike the tail-end of a northern blizzard while crossing the plains in January or February, farther west in the southern Rockies, where the Santa Fe runs, the normal weather is notably clear and sunny. There is so little humidity that the midday sun nearly always brings a genial warmth. If there was a snowfall yesterday, the chances are it has almost disappeared today.

The days are few and far between when it is cold enough outside the well-warmed Santa Fe cars to be noticeable. Pleasant days are the rule.

COLORADO GRAND CANYON—A TITANIC CHASM

The green pines and cedars of the mountain country create the illusion of a summer landscape. You see Indians and Mexicans sunning themselves in adobe doorways and cowboys riding the range. A succession of crisp October days best expresses the average winter weather conditions.

GRAND CANYON

This tremendous chasm, in its most accessible portion, has a length of 217 miles. Its vertical depth is about 6,000 feet, and its width is thirteen miles at the point to which visitors are conducted. A hundred Yosemites might lie almost unperceived in its immense reaches, and Niagara would be scarcely a detail. There is nothing else on this round earth of ours that is half so magnificent, half so beautiful. It must be seen to be appreciated. The climate is cool in summer on the rim and generally mild in winter, with almost continual sunshine. Snowstorms are not frequent and are of short duration. A Grand Canyon outing therefore is feasible any day of the year.

This stupendous scenic wonder of the world is reached by daily trains from Williams, a town on the Santa Fe main line in Arizona, 379 miles west of Albuquerque.

The side trip is comfortably and quickly made on the Grand Canyon Railway, a branch of the Santa Fe. This line is built from Williams north sixty-four miles to the rim at the head of Bright Angel Trail.

ON THE WESTERN PACIFIC

Leaving Chicago on the Denver & Rio Grande one passes through the highly picturesque and interesting section of the state of Colorado, sees the Royal Gorge and Canyon of the Colorado, visits the wonderful home of the Mormons, Salt Lake City, situated in Jordan Valley near the Great Salt Lake, famous because of its beautiful streets and driveways, its grand homes, the great Mormon temple and tabernacle. Arriving at Ogden the Western Pacific trains take you over their route through northern Nevada, entering California by way of the old emigrant route through Beckwith Pass, one of the lowest passes of the Sierra Nevada Mountains. This is one of the most delightful routes, for the scenes are constantly changing, great groves of timber, beautiful mountain valleys nestling beneath snow-capped peaks, many summer resorts surrounded by gigantic pines, clear mountain streams bustling with trout greet the eye of the traveler like an ever-changing kaleidescope. After leaving the higher valleys the train passes into the pitcuresque and awe-inspiring Feather River canyon—where Nature's grandest scenes greet one on every side. Suddenly the train bursts forth into California's grandest valley, the Sacramento, at the old historic city of Oroville, then on down through the valley itself with its orange groves, fruit orchards, rice and grain fields, its bustling towns and hamlets each vieing with the other for supremacy, making a short stop at the state capital, the city of Sacramento, and the metropolis of the valley, thence after a few short hours' ride down the center of the valley, across the low Contra Costa mountains to the gem of the West, the city by the Golden Gate, the city that knows how, San Francisco.

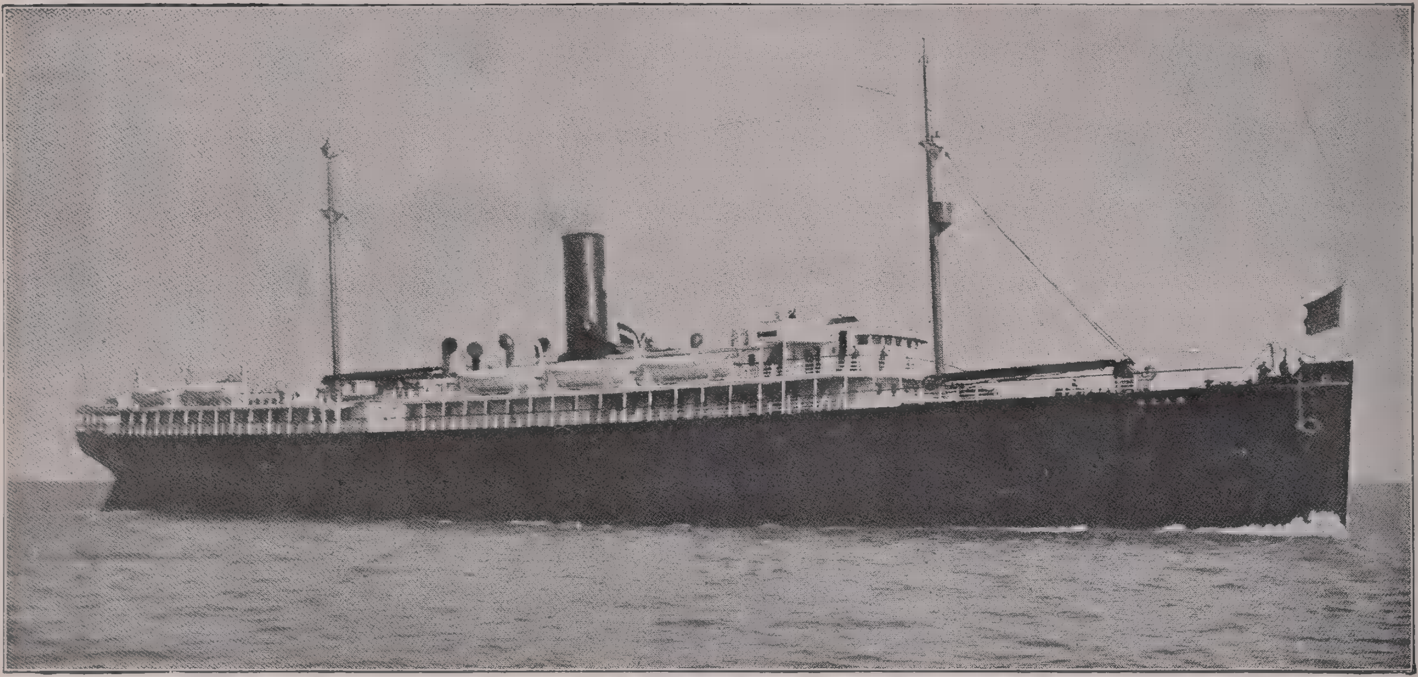
THE GOLDEN GATEWAY AND THE ORIENT

More than all things else, San Francisco stands out among the cities of the earth as possessing the finest land-locked harbor in the world. Upon its four hundred and fifty square miles may be assembled the combined navies and the merchant fleets of the nations of the earth. Nature unwittingly achieved a commercial triumph in rendering what we now know as the bay of San Francisco, a waterway protected from storms and of such great depth that dredging is not required. In fact, Mother Nature left but little for man to accomplish, and such great efforts as Britain has been put to in rendering Liverpool an international port are unnecessary in San Francisco Bay. Upon the San Francisco waterfront the produce of the United States, the most prosperous

FEATHER RIVER SCENE ON THE WESTERN PACIFIC and progressive nation in the world, may be directly interchanged from freight car to steamer hold with products of China, the oldest of nations, which is now awakening from its slumber of three thousand years.

So it is that San Francisco, the gateway to the Orient, faces a commercial future, because of her maritime commerce, more auspicious that that of any other port. The great trade battles of the world will be fought upon the Pacific. The day is not distant when the Atlantic will yield to the Pacific, just as the world's commerce, ever moving westward, centuries ago passed from the cities of the Mediterranean to the Occidental seas.

The glamour of history only becomes of commercial importance when it casts light on the future and reveals the present. Today San Francisco is nearer to the Orient than at any time in her history. The ocean commerce of this port became extensive during the Spanish-American war. Despite fluctuations in San Francisco's trade caused by such events as the great fire of 1906 and the depressed commercial conditions attendant upon the general depression throughout the world and upon the speedy rebuilding of the city, our merchants have every year come in closer touch with the Orient. San Francisco's sea commerce for 1914 exceeded $134,779,000, almost equally divided between imports and exports.



THE BEAR

THE SAN FRANCISCO AND PORTLAND STEAMSHIP COMPANY

A trip to California or Oregon can be made most interesting if the traveler will break the monotony of the rail trip by taking the steamships of The San Francisco and Portland Steamship Company either from Portland to San Francisco or Los Angeles or from Los Angeles to San Francisco, or Los Angeles or San Francisco to Portland. In this manner not only is the passenger able to recuperate from a tedious and dusty rail trip by a two or three-days' ocean trip, thereby arriving at his destination fresh and clean, but there is no route so rich in scenic and historic interest. Over one hundred miles of the beautiful Columbia River between Portland and the sea is traversed by daylight, affording passengers a view of what is unquestionably the grandest river and mountain scenery to be found on the American Continent, and the voyage between the mouth of the Columbia River and San Francisco and Los Angeles is only a few miles from the shore, so that the coast ranges of California and Oregon with their varying contours and colors are almost constantly in view, the journey including a view of the Golden Gate and the bay of San Francisco with all their objects of scenic and historic interest.

The steamships on which this voyage is made are the *Bear, Beaver* and *Rose City.* Modern ships, designed especially for the route, they are large, roomy, comfortable and clean, are nearly 400 feet long and about 5,000 tons burden and with accommodations for nearly 300 first-class passengers. All tickets over this route include berth and meals without extra charge while on the steamers, and especial attention is given to the cuisine, the line having achieved a reputation for its meals which is nation wide.

The trip is also of great educational value, affording an opportunity to study at close hand the lumbering, fishing and agricultural industries of the north Pacific Coast. The popularity of the line is attested by its average annual carryings of over 60,000 passengers.

TOYO KISEN KAISHA

In order that travelers across the broad and beautiful Pacific Ocean, between America and Japan, may enjoy the same luxuries, comforts and conveniences to be found on the great trans-Atlantic passenger boats, the Toyo Kisen Kaisha (Oriental Steamship Company) has placed in service between the city of San Francisco and Japanese and Chinese ports a trio of 22,000-ton steamships of the latest and most elaborate design, voted by all who have traveled upon them to be "The three queens of the Western ocean." Of these the *Tenyo Maru* (Heaven and Sea) and the *Chiyo Maru* (Earth and Sea) were placed in service within six months of one another, about three years ago.

The *Shinyo Maru* (Springtime on the Ocean) steamed from Kobe, Japan, on her maiden trip on August 26, 1911, and has since been on regular schedule between America and the Orient.

It is a difficult task to describe the beauty, comforts and conveniences of these three splendid vessels. The first impression, upon boarding any one of the trio, is that you have stepped into a floating hotel of unusual excellence, where the employes have specialized in neatness and attentiveness, and where the appointments are all that the heart could desire.

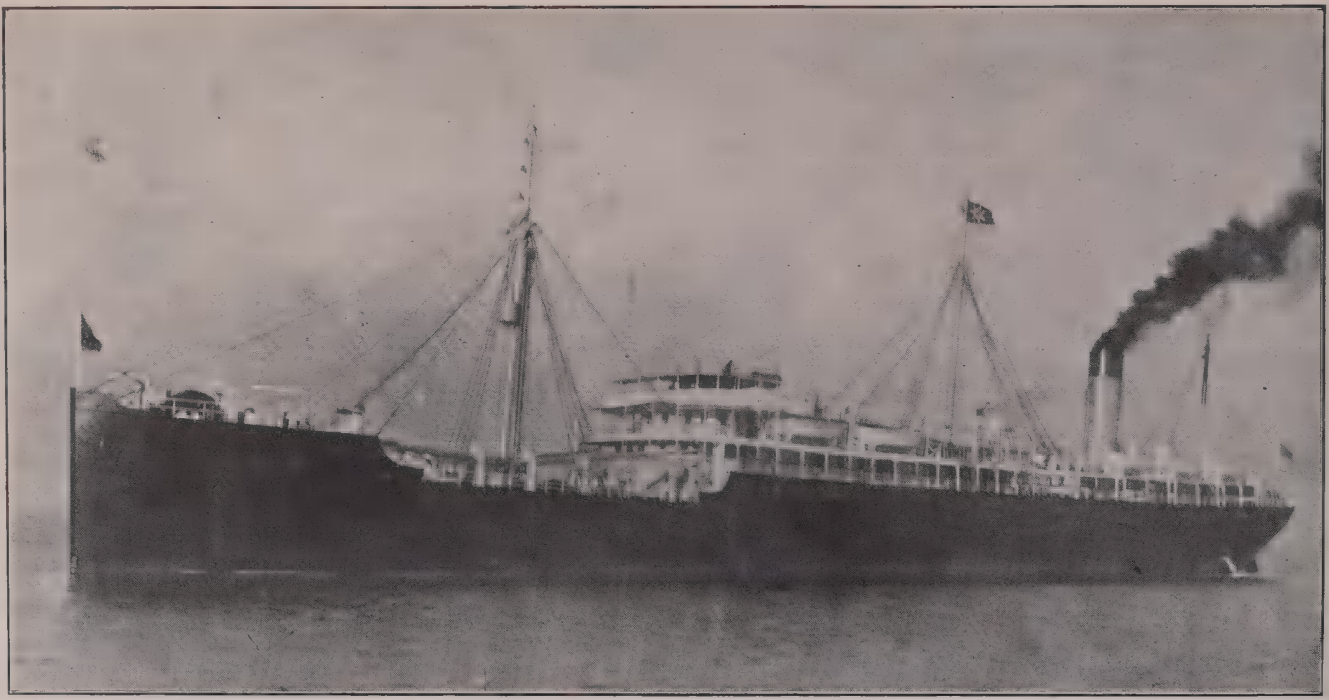
The ships are built to carry 1,150 passengers, as follows: First-class passengers, 275; second-class passengers, 54; steerage passengers, 821. The Japanese steerage is forward and the Chinese steerage aft on E deck. The sanitary arrangements are as perfect as science can make them.

The commissary arrangements are elaborate and complete. Electricity plays an important part in the culinary departments. The ice-making plant insures a constant supply of fresh foods in perfect condition. There are separate galleys for Chinese and Japanese steerage passengers.

The dining saloons, lounging rooms and smoking compartments are admittedly the most beautiful of any trio of transoceanic steamships. Rich and wonderful Japanese tapestries; priceless mahogany, teakwood, walnut and maple; artistic mural decorations—these and a hundred other beautifying features predominate in the general meeting rooms of the first-cabin passengers, while the second-cabin travelers are taken care of in a most thorough and comfortable way. The main dining saloon is located on the promenade deck, in a beautiful deckhouse 280 feet long, and the music rooms, smoking room, ladies' social hall and writing rooms are all fascinatingly decorated and furnished.

The *Shinyo Maru, Chiyo Maru* and *Tenyo Maru,* in short, offer to the discriminating trans-Pacific traveler a clean, safe and luxurious journey, punctuated with pleasures of every conceivable sort; shortened to the minimum by every latter-day speed-device; marked by courtesy and extra-attentiveness on the part of those employes who come in contact with the passengers—a voyage which, once taken, will never be forgotten and, more than likely, will ofttimes be repeated by those who love the "ocean of oceans."

SHINYO MARU



S. S. WILHELMINA

MATSON NAVIGATION COMPANY

IN THE ISLANDS

To persons desiring a complete change of climate, scenery and environment, Honolulu and the Hawaiian Islands offer the most alluring attractions. With its mild, tropical climate, picturesque groves of cocoanut palms, forests of ferns, and smooth white bathing beaches, Hawaii is the place most sought by those desiring perfect rest and freedom from business cares, as well as tourists who delight in exploring lands where deep canyons, beautiful waterfalls, mountain peaks and tropical foliage abound on every hand.

If you have never seen an outrigger-canoe, or enjoyed an exhilarating ride on the surf, there is new pleasure in store for you in these distinctly Hawaiian pastimes, together with surf bathing, motoring over level roads, tennis, golf and polo the year around.

The Oahu Country Club at Honolulu has an excellent golf course, situated in a very picturesque valley, a short distance from Honolulu.

For those who are musically inclined, the native songs, which are sung by Hawaiian boys at the various hotels, will linger long in the memory of the trip to Hawaii.

There are numerous points of interest in and around Honolulu. From the Pali (six miles from Honolulu), and at quite an elevation, may be obtained a wonderful view of the island, showing extinct craters, mountain peaks, sugar, pineapple and banana plantations. The aquarium in Kapiolani Park contains probably the best collection of tropical fish in the world, and the Bishop Museum has a very valuable exhibition of relics and curios acquired by frequent expeditions to the South Seas, showing forms of life, habits and customs of the natives of the most important island groups.

Honolulu contains half a dozen modern hotels, affording all comforts and conveniences, and the rates charged are the same as on the mainland.

On the island of Hawaii is the active volcano of Kilauea, one of Nature's greatest wonders. The volcano trip is inexpensive, and two of the Matson Line ships (*Matsonia* and *Wilhelmina*) proceed to Hilo, island of Hawaii (the nearest port to the volcano), after calling at Honolulu.

If you have only a limited time, the entire round trip from San Francisco can be made in twenty days by the same steamer. This gives twelve delightful days on the blue Pacific. The remaining eight days are passed in the island on shore.

Another side trip from Honolulu may be made on either the *Manoa* or *Lurline* to the port of Kahului, island of Maui, from which port one may visit Iao Valley, or the extinct crater, Haleakala.

The trip to Iao Valley may be taken by automobile. The trip to the summit of Haleakala (over 10,000 feet in height) is made by rail, automobile and horseback. The trip is made in the evening, so as to witness the sunrise, which is unexcelled in gorgeousness anywhere.

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